CALIFORNIA PLANT PEST AND DISEASE REPORT

CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE
1220 N STREET, SACRAMENTO, CALIFORNIA 95814

INDEX OF PLANT VIRUS, VIROID, AND MYCOPLASMA-LIKE DISEASES IN CALIFORNIA

by Dennis E. Mayhew and Amy L. Wiens

Part II

HOST LIST
pages 141-163

What's Inside:

Vol. 12 Numbers 5-6
October - December, 1993

Entomology Highlights. 119
Significant Finds. 119
New County Records. 124
Exclusion 124
Quarantine Interceptions 125-131
Border Stations. 132
Zebra Mussel Report. 132-133
Botany Highlights. 134
Handbook 25. 134
Plant Pathology Highlights. 139
Wisteria Gall Report. 139
Index of Plant Viruses etc 141

Lisianthus Mosaic on Eustoma (*Lisianthus*)
Healthy on Left, Infected on Right
Photo by Jim Heath, CDFA

CALIFORNIA PLANT PEST AND DISEASE REPORT

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ENTOMOLOGY HIGHLIGHTS

SIGNIFICANT FINDS

MEDITERRANEAN FRUIT FLY, *Ceratitis capitata*, -(A)- In the last part of 1993, a total of 64 adult Mediterranean fruit flies, as well as 11 larvae, were found in the counties of **Los Angeles, Orange, San Bernardino, San Diego,** and **Riverside**. All the finds are listed on pages 121-122.

Interesting data is being developed regarding the Medfly collection records from the southern California locations over the last several years. The following report by Dr. Eric Fisher of the CDFA Analysis and Identification Branch explains the data. The graph on page 120 illustrates that data.

> Adult Medfly activity is very seasonal in southern California. A summary of all trap catches in the greater Los Angeles area (Los Angeles and adjacent counties), from the first catch in 1975 through the end of 1993, is presented in the acoompanying graph. Of the 1139 adult Medflies trapped during this period, 1098 (96.4%) were captured between July 1 and December 31.

ORIENTAL FRUIT FLY, *Bactrocera dorsalis*, -(A)- Twelve adult Oriental fruit flies were found in **Los Angeles, Alameda,** and **Santa Clara** counties in the last three months of the year. A list of the records are presented on page 123.

MEXICAN FRUIT FLY, *Anastrepha ludens*, -(A)- There was quite an increase in Mexican fruit fly finds during this period in comparison to only two adults found during the summer months. Twenty-two flies were found in traps primarily in **Los Angeles** County, but also in **San Diego** and **Riverside** counties. The listings are on page 123.

GREEN SHIELD SCALE, *Pulvinaria psidii*, -(A)- Green shield scale was found for the first time in California in **Orange** County this year. Further delimitation surveys based on the previous finds [SeeCPPDR 12(3-4):80-85], have been extended into the city of Orange where the latest find occurred. Also, this soft scale appears to be doing very well on *Salvia greggii* in the center of the infested area.

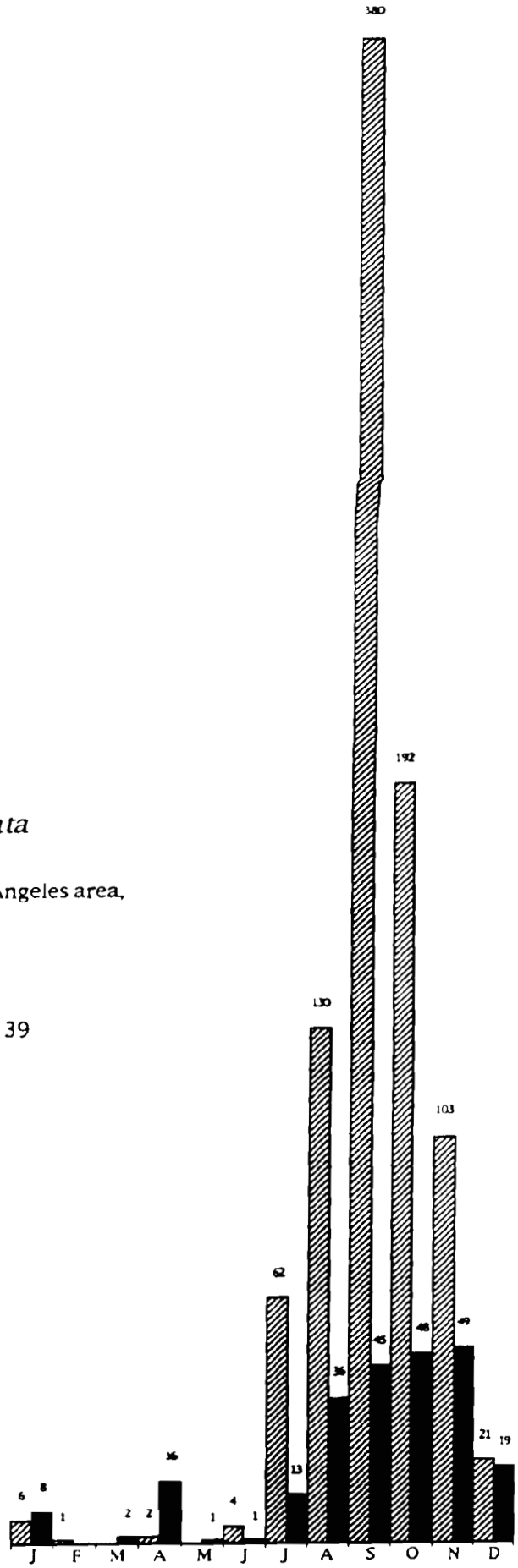
MED FLY - *Ceratitis capitata*

Monthly summary of finds in Los Angeles area,
1975 through 1993

Total number of adults trapped: 1139

Males (901)

Females (238)



Mediterranean Fruit Fly, *Ceratitis capitata*, -(A)- 1993 Collections

County	City	Date	#M/F/Stage	Trap	Host	Collectors
Orange	Orange	09/15/93	0/1	McPhail	orange	Gonzales
San Bernardino	Upland	?	0/1	McPhail	grapefruit	?
Los Angeles	Los Angeles	10/03/93	3L	---	lemon	Lopez
Los Angeles	Los Angeles	10/06/93	3L	---	orange	Luna
Los Angeles	Los Angeles	10/07/93	2L	---	tangerine	Luna
Los Angeles	Los Angeles	10/07/93	3L	---	grapefruit	Gonzales
San Bernardino	Ontario	10/07/93	0/1	McPhail	lemon	Sarmiento
Los Angeles	Chatsworth	10/11/93	1/0	Yellow Panel	olive	Palmerin
Orange	Anaheim	10/11/93	1/1	Yellow Panel	guava	Giacopuzzi
Orange	Orange	10/11/93	1/0	Yellow Panel	grapefruit	Daiz
Orange	Anaheim	10/14/93	2/0	Yellow Panel	grapefruit	Miramontes
Los Angeles	East Los Angeles	10/15/93	1/0	Yellow Panel	peach	Garcia
Los Angeles	Pomona	10/18/93	0/1	McPhail	fig	Green
Orange	Orange	10/19/93	1/0	Yellow Panel	grapefruit	Sanchez
Orange	Orange	10/21/93	1/0	Yellow Panel	pepper	Garagliano
Los Angeles	Boyle Heights	10/22/93	1/0	Yellow Panel	olive	Aurre
Los Angeles	Boyle Heights	10/22/93	1/0	Yellow Panel	guava	?
Los Angeles	East Los Angeles	10/23/93	1/0	Yellow Panel	guava	Lewis/Rice
Los Angeles	Lynwood	10/25/93	0/1	McPhail	grapefruit	Abbott
Los Angeles	South Gate	10/26/93	0/1	McPhail	persimmon	Beguico
Orange	Orange	10/26/93	1/0	Yellow Panel	persimmon	Giacopuzzi
San Bernardino	Upland	10/26/93	1/0	Jackson	orange	Lopez
Orange	Anaheim	10/27/93	0/1	McPhail	orange	Sandoval
Los Angeles	Glendora	10/27/93	1/0	McPhail	pear	Wilkinson
Los Angeles	Whittier	10/28/93	0/1	Yellow Panel	orange	Sampson
Los Angeles	East Los Angeles	10/29/93	0/1	McPhail	guava	Beguico
Los Angeles	East Los Angeles	10/29/93	0/1	McPhail	grapefruit	Afarinesh
Los Angeles	Downey	10/29/93	0/1	Yellow Panel	apple	Diaz
San Bernardino	Chino	11/01/93	1/0	Yellow Panel	orange	Frias
San Bernardino	Montclair	11/01/93	0/1	Yellow Panel	grapefruit	Tarver
Los Angeles	Downey	11/02/93	1/0	Jackson	guava	Cardenas
Los Angeles	West Covina	11/03/93	0/1	McPhail	guava	Lopez
Orange	Garden Grove	11/03/93	1/0	Yellow Panel	avocado	Messina
San Bernardino	Ontario	11/03/93	0/1	Yellow Panel	orange	?

Mediterranean Fruit Fly, *Ceratitis capitata*, -(A)- 1993 Collections

County	City	Date	M/F Stage	Trap	Host	Collectors
San Bernardino	Upland	11/03/93	0/1	Jackson	guava	Lopez
Los Angeles	South Gate	11/04/93	0/1	Yellow Panel	lemon	Goddard
Los Angeles	South Gate	11/04/93	1/0	Yellow Panel	orange	?
Los Angeles	South Gate	11/04/93	0/1	McPhail	lemon	Napoles
Los Angeles	South Gate	11/04/93	0/1	McPhail	guava	Napoles
Los Angeles	Lynwood	11/04/93	0/1	Yellow Panel	lemon	Duffy
Los Angeles	Cudahy	11/04/93	0/1	McPhail	orange	Beguico
Los Angeles	Valinda	11/04/93	0/1	Jackson	guava	Parayno
Los Angeles	La Puente	11/05/93	1/0	Yellow Panel	walnut	?
Los Angeles	Pico Rivera	11/08/93	0/1	McPhail	orange	Zelaya
Los Angeles	Pico Rivera	11/08/93	0/1	McPhail	orange	Zelaya
Los Angeles	Monrovia	11/08/93	0/1	McPhail	persimmon	Leaf
Los Angeles	Altadena	11/08/93	0/1	McPhail	fig	?
Riverside	Pedley	11/08/93	1/0	Jackson	orange	Gray
Los Angeles	Bell Gardens	11/09/93	0/1	McPhail	guava	Valdez
Los Angeles	Downey	11/09/93	0/1	McPhail	sapote	Valdez
Los Angeles	Cudahy	11/10/93	0/1	Yellow Panel	orange	Gutierrez
Los Angeles	Valinda	11/10/93	0/1	McPhail	apple	Lopez
San Diego	Fallbrook	11/10/93	0/1	Jackson	persimmon	Wise
Los Angeles	Altadena	11/11/93	1/0	Yellow Panel	orange	Mandujano
Los Angeles	South Gate	11/12/93	0/1	McPhail	lemon	Valdivia
San Bernardino	Ontario	11/12/93	0/1	Yellow Panel	olive	Pulido
San Bernardino	Ontario	11/12/93	0/1	Yellow Panel	orange	Pulido
Los Angeles	Whittier	11/13/93	0/1	Yellow Panel	orange	Torres
Los Angeles	Pico Rivera	11/15/93	0/1	McPhail	lemon	Sifuentes
Los Angeles	South El Monte	11/16/93	1/0	Steiner	guava	Miranda
Los Angeles	Arcadia	11/18/93	1/0	Jackson	persimmon	Cabacungan
Los Angeles	Wilmington	11/29/93	0/1	McPhail	guava	Rici
Los Angeles	Compton	12/09/93	0/1	McPhail	lemon	Aquino
Los Angeles	Hollywood	12/09/93	0/1	McPhail	orange	Barrera
Los Angeles	Compton	12/16/93	1/0	Jackson	ornamental	Burke
Riverside	Corona	12/17/93	0/1	McPhail	grapefruit	Williams

Oriental Fruit Fly, *Bactrocera dorsalis*, -(A)- 1993 Collections

County	City	Date	M/F/Stage	Trap	Host	Collector
Los Angeles	Van Nuys	10/11/93	1/0	Jackson	orange	Carrera
Los Angeles	Van Nuys	10/12/93	1/0	Jackson	orange	Rivas
Los Angeles	Redondo Beach	10/12/93	2/0	Jackson	avocado	Shirvani
Los Angeles	North Hollywood	10/19/93	1/0	Jackson	orange	Abdelmalak
Santa Clara	San Jose	10/27/93	1/0	Jackson	apple	Choy
Alameda	Fremont	11/02/93	1/0	Jackson	orange	Gilman
Alameda	Fremont	11/03/93	1/0	Jackson	fig	Lause
Los Angeles	Sherman Oaks	11/08/93	0/1	McPhail	grapefruit	Iniquez
Los Angeles	Los Angeles	11/15/93	1/0	Jackson	guava	Barrera
Los Angeles	Palos Verdes Estates	12/01/93	1/0	Jackson	guava	Gonzalez
Los Angeles	Sherman Oaks	12/06/93	0/1	McPhail	lemon	Spilsbury

Mexican Fruit Fly, *Anastrepha ludens*, -(A)- 1993 Collections

County	City	Date	M/F/Stage	Trap	Host	Collector
San Diego	El Cajon	10/01/93	0/1	McPhail	sapote	Pecina
San Diego	El Cajon	10/18/93	0/1	McPhail	sapote	Cardona
Riverside	Corona	10/19/93	0/1	McPhail	orange	Finnerty
Los Angeles	Boyle Heights	10/26/93	0/2	Jackson	lemon	Valdez
Los Angeles	East Los Angeles	10/27/93	2/0	McPhail	sapote	Smith
Los Angeles	East Los Angeles	10/27/93	1/0	McPhail	lemon	Smith
Los Angeles	Los Angeles	10/29/93	0/1	McPhail	sapote	Abdelmalak
Los Angeles	Boyle Heights	10/30/93	0/1	McPhail	sapote	Villarruel
Los Angeles	Boyle Heights	10/30/93	1/0	McPhail	fig	Villarruel
Los Angeles	Boyle Heights	10/30/93	1/0	McPhail	avocado	Napoles
Los Angeles	Boyle Heights	11/01/93	2/0	McPhail	sapote	Fenochio
Los Angeles	Boyle Heights	11/04/93	0/1	McPhail	sapote	Fenochio
Los Angeles	Boyle Heights	11/04/93	1/2	McPhail	fig	Fenochio
Los Angeles	Los Angeles	11/04/93	0/1	McPhail	sapote	Iniquez
Los Angeles	Los Angeles	11/11/93	0/1	McPhail	orange	Gonzalez
Los Angeles	Los Angeles	11/17/93	1/0	McPhail	persimmon	Valdez
San Diego	El Cajon	11/29/93	0/1	McPhail	orange	Cardona

NEW COUNTY RECORDS

SWEET POTATO WHITEFLY, *Bemisia tabaci* -(C)- A collection of this whitefly was made in a dooryard situation in Marysville, **Yuba** County by Lynn Martin and Errol Storm from tomatoes on November 1. This constitutes a new county record. The whitefly had been found in neighboring Sutter County last year, but populations did not appear to survive the winter there. These whiteflies in Marysville likely were introduced on nursery stock and therefore probably do not indicate an overwintering population from last year. Morphologically the whiteflies belong to the "B" strain.

EXCLUSION

Although the following two beetle species were collected in California, we do not consider the single individuals to represent established infestations in the state.

COFFEE BEAN WEEVIL, *Araecerus fasciculensis*, -(Q)- This bean weevil in the family Bruchidae, can be a serious pest of stored legumes. A specimen has been collected from a kitchen counter of a home in Garden Grove, **Orange** County. The collection was made on September 22 by the home owner who submitted it to the Agricultural Commissioner's office for identification.

A FALSE POWDER POST BEETLE, *Sinoxylon conigerum*, -(Q)- This destructive boring insect is commonly collected from pallets and other dunnage found on freight shipments from Southeast Asia. Apparently some of the beetles may have escaped, because a specimen was collected from a Japanese beetle trap in the city of Fresno, **Fresno** County. County trapper Peck made the collection on September 3.

The following "A," "B" and 'Q" rated insects have been found infesting nursery stock in the state during the last third of 1993.

MACKENZIE MEALYBUG, *Dysmicoccus mackenziei*, -(Q)- This mealybug, probably native to tropical America, is occasionally found on imported *Tillandsia* plants. It was recently collected from these plants at a nursery in Pacifica, **San Mateo** County on October 14 by Jeff Garibaldi.

A MEALYBUG, *Chorizococcus* sp. -(Q)- This apparently undescribed species was also collected in Pacifica, **San Mateo** County by Jeff Garibaldi at the above location. Like the above species, this mealybug is also commonly encountered on tillandsias from tropical America.

MAGNOLIA WHITE SCALE, *Pseudaulacaspis cockerelli*. -(A)- This perennial pest is commonly encountered in greenhouses and eradication measures are promptly undertaken when found. Recent finds include *Chamaedorea* plants sampled by S. Squires at Carpinteria, **Santa Barbara** County on October 8, and by K. Burke on *Phoenix roebelenii* at Santa Barbara, **Santa Barbara** County on October 10 . This scale has also been collected from the garden section of a major department store chain at Atwater, **Merced** County. Bob Aguilar made the collection on September 27. Also

on September 27, a collection was made by Lindsay Worchester on *Strelitzia* on September 27 from a nursery in Encinitas, **San Diego** County. Also in San Diego County, Steve Desserich found this scale on palms in an ornamental plantings in the atrium of a doctor's office complex in San Marcos. The collection was made on December 14, and the county personnel are currently working out eradication strategies to control the scale.

GREEN SHIELD SCALE, *Pulvinaria psidii*, -(A)- Found established in California for the first time this summer in Orange County [see CPPDR 12(3-4):80-85], this scale insect has been found many times in quarantine and in post-quarantine nursery situations. It has again been found in the nursery situation this time in **Los Angeles** County. The collection was made by Dan Papilli from *Gardenia* and from *Ficus benjamina* and *Schinus terebinthifolia* trees on December 7 at Monterey Park.

NESTING WHITEFLY, *Paraleyrodes minei*, -(Q)- This whitefly is beginning to become a pest where it occurs in dooryard situations in southern California. It is also apparently moving around the state readily and has been found in several nurseries recently. A find mentioned in the last issue of CPPDR occurred at Stockton, **San Joaquin** County. More recently it was found in a nursery in Oxnard, **Ventura** County from *Citrus* on September 16 by Kragh. The plants had originated in a nursery in Bonsall, **San Diego** County.

PALM MEALYBUG, *Palmicultor palmarum*, -(Q)- Palm mealybug is commonly encountered on certain palms and particularly on un-husked coconuts from the Pacific islands. It was recently found by Lisa Correia infesting Kentia(?) palms in a nursery in Penngrove, **Sonoma** County on November 4.

The following pages contain a list of recent interceptions of "A", "B" and "Q" pests that have been intercepted over a period of time on incoming plant shipments and on other items that can harbor these pests. This list does not represent pests intercepted at the border stations. The dates begin in July and continue through October of 1993. This does not exactly match the dates of this report (October - December), but there is a backlog of entries that must be made into the computer data base which prevents us from supplying the more recent interceptions.

A list of this type has been included in many past issues of the CPPDR, but not in some of the more recent issues because they take up a lot of space, a lot of time is required to generate the lists, and our focus has been on other critical issues of interest to the pest regulatory community. However, these lists have been requested because they are used by field personnel to keep track of currently arriving pests in order to complete a more thorough and efficient job of quarantine pest detection. We will attempt to supply these lists as often as possible.

"A", "B", and "Q" Rated Arthropods and Mollusks Intercepted in Quarantine July - October 1993

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Q	*Orchamoplatus mammaeferus*	croton whitefly	7/23/93	Hawaii	SDo	Maile Lei	Ginsky
A	*Anastrepha ludens*	Mexican fruit fly	7/27/93	?	LA	*Mangifera indica*	Bennett/Tiffer
B	*Cecilioides acicula*	a snail	7/27/93	FLA	LA	*Phoenix* sp.	Sian
Q	*Pheidole megacephala*	bigheaded ant	7/28/93	Hawaii	LA	*Protea* sp.	Herrera
A	*Pulvinaria psidii*	green shield scale	7/29/93	Hawaii	SMo	*Zingiber* sp.	Pendelton
Q	*Orchamoplatus mammaeferus*	croton whitefly	7/29/93	Hawaii	SDo	*Alyxia* sp.	Fernandez
Q	*Pheidole megacephala*	bigheaded ant	7/30/93	Hawaii	SDo	*Protea* sp.	Matsumoto
Q	*Veronicella* sp.	a slug	8/1/93	Hawaii	LA	*Cordyline terminalis*	Herrera
Q	*Anoplolepis longipes*	longlegged ant	8/2/93	Hawaii	SAC	Flowers	Bianchi
Q	*Orchamoplatus mammaeferus*	croton whitefly	8/2/93	Hawaii	SON	*Alyxia loivaeformis*	Czarnecki
B	*Siphanta acuta*	torpedo bug	8/2/93	Hawaii	SON	*Alyxia loivaeformis*	Czarnecki
B	*Dysmicoccus alazon*	alazon mealybug	8/2/93	Ecuador	VFN	Bananas	Dullam
A	*Pinnaspis strachani*	lesser snow scale	8/2/93	Hawaii	LA	*Cordyline terminalis*	Mehraban
Q	*Aleurotulus anthuricola*	anthurium whitefly	8/3/93	Hawaii	STB	*Anthurium* sp.	Squires
A	*Pulvinaria psidii*	green shield scale	8/4/93	Hawaii	STB	*Zingiber* sp.	Squires
Q	*Pheidole megacephala*	bigheaded ant	8/4/93	Hawaii	SDo	*Cordyline terminalis*	Crandall
Q	*Technomyrmex albipes*	an ant	8/4/93	Hawaii	KFR	*Heliconia* sp.	Williams
A	*Pulvinaria psidii*	green shield scale	8/5/93	Hawaii	SMo	*Zingiber* sp.	Garibaldi
Q	*Aleurodicus dispersus*	spiraling whitefly	8/5/93	Hawaii	SMo	*Cocos nucifera*	Kingore
Q	*Palmicultor palmarum*	palm mealybug	8/5/93	Hawaii	SMo	*Cocos nucifera*	Kingore
Q	*Pseudococcus lycopodii*	clubmoss mealybug	8/5/93	Hawaii	SDo	*Lycopodium* sp.	Crandall
A	*Pseudaulacaspis cockerelli*	magnolia white scale	8/6/93	Hawaii	SFo	*Strelitzia* sp.	Seslowe
A	*Solenopsis invicta*	red imported fire ant	8/6/93	Louisiana	LA	Freight	Sium
A	*Solenopsis invicta*	red imported fire ant	8/9/93	Alabama	LA	Freight	Calicchia
Q	*Aleurodicus dispersus*	spiraling whitefly	8/10/93	Hawaii	STB	*Dracaena marginata*	Squires
Q	*Sinoxylon conigerum*	false powderpost beetle	8/10/93	Indonesia	LA	Crates	Rabe
A	*Lopholeucaspis* [illegible]	Cockerell scale	8/11/93	Costa Rica	SJ	*Dracaena marginata*	Williamson
A	[illegible]	lesser snow scale	8/11/93	Costa Rica	SJ	*Dracaena marginata*	Williamson
Q	*Solenopsis geminata*	a fire ant	8/11/93	Texas	SAC	*Nandina* sp.	[illegible]
Q	*Aleurod*[illegible] *dispersus*	spiraling whitefly	8/11/93	Hawaii	LA	*Ocimum* sp.	Herrera
Q	*Atractomorpha ambigua*	a grasshopper	8/11/93	Hawaii	LA	*Ocimum* sp.	Herrera
Q	*Technomyrmex albipes*	an ant	8/11/93	Hawaii	OR	*Zingiber* sp.	Wynn

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
A	*Pseudaulacaspis cockerelli*	magnolia white scale	8/12/93	Florida	LA	*Ravenea rivularis*	Rawald
Q	*Anoplolepis longipes*	longlegged ant	8/12/93	Hawaii	LA	Areca palm	Awad
A	*Pinnaspis strachani*	lesser snow scale	8/12/93	Hawaii	LA	Areca palm	Awad
A	*Pseudaulacaspis cockerelli*	magnolia white scale	8/12/93	Hawaii	LA	Areca palm	Awad
Q	*Pheidole megacephala*	bigheaded ant	8/13/93	Hawaii	SDo	*Protea* sp.	Ginsky
Q	*Sophonia rufofascia*	a leafhopper	8/16/93	Hawaii	SMo	*Philodendron* sp.	Pendleton
Q	*Malcosoma* sp.	a tent caterpillar	8/16/93	Virginia	SLO	Household goods	Little
Q	*Coccus viridis*	green scale	8/16/93	Hawaii	OR	*Zingiber* sp.	Do
Q	*Sybra alternans*	a longhorned beetle	8/16/93	Hawaii	LA	Taro	Awad
Q	*Veronicella* sp	a slug	8/16/93	Hawaii	LA	Taro	Awad
Q	*Chelymorpha cribraria*	a leaf beetle	8/16/93	Florida	LA	Herbs	Herrera
A	*Pseudaulacaspis cockerelli*	magnolia white scale	8/17/93	Florida	LA	*Phoenix roebelenii*	Calicchia
Q	*Anoplolepis longipes*	longlegged ant	8/17/93	Hawaii	LA	Cut flowers	Herrera
Q	*Technomyrmex albipes*	an ant	8/17/93	Hawaii	LA	Cut florals	Herrera
A	*Solenopsis invicta*	red imported fire ant	8/18/93	Florida	LA	*Phoenix roebelenii*	Sium
Q	*Amorbia emigratella*	Mexican leafroller	8/18/93	Hawaii	LA	*Zingiber* sp.	Herrera
A	*Aspidiotus destructor*	coconut scale	8/18/93	Florida	OR	*Chamaedorea elatiacturum*	Bennett
Q	*Pheidole megacephala*	bigheaded ant	8/18/93	Hawaii	LA	Fennell	Herrera
A	*Pseudaulacaspis cockerelli*	magnolia white scale	8/18/93	Florida	OR	*Phoenix roebelenii*	Bennett
Q	*Pseudococcus lycopodii*	clubmoss mealybug	8/19/93	Hawaii	SDo	*Lycopodium* sp	Crandall
A	*Solenopsis invicta*	red imported fire ant	8/19/93	Louisiana	LA	Truck	Sium
Q	*Aleurocerus palmae*	palm whitefly	8/20/93	Colombia	BUT	Palm	Ewing
Q	*Phyllophaga* sp.	a may beetle	8/20/93	New York	PLA	Household goods	Henderson
A	*Pinnaspis strachani*	lesser snow scale	8/23/93	Costa Rica	SJ	*Dracaena* sp.	Williamson
Q	*Technomyrmex albipes*	an ant	8/23/93	Hawaii	LA	Cut florals	Herrera
Q	*Anoplolepis longipes*	longlegged ant	8/24/93	Hawaii	LA	Cut flowers	Herrera
Q	*Malacosoma americanum*	eastern tent caterpillar	8/24/93	Virginia	RIV	Household goods	Domenigon
Q	*Bambusaspis robustum*	bamboo pit scale	8/25/93	Hawaii	STB	Bamboo	Squires
A	*Pinnaspis strachani*	lesser snow scale	8/25/93	Hawaii	STB	Cut florals	Squires
Q	*Sophonia rufofascia*	a leafhopper	8/25/93	Hawaii	STB	Cut florals	Squires
Q	*Tapinoma melanocephalum*	black-headed ant	8/25/93	Hawaii	STB	Cut florals	Squires
Q	*Sinoxylon conigerum*	a false powderpost beetle	8/25/93	India	LA	Crates	Azhar
Q	*Coccus viridis*	green scale	8/25/93	Hawaii	OR	*Alpinia purpurata*	Wynn
Q	*Sophonia rufofascia*	a leafhopper	8/25/93	Hawaii	LA	*Cordyline terminalis*	Herrera
B	*Bradybaena similaris*	a snail	8/25/93	Florida	LA	Winged beans	Herrera

Q	*Malacosoma americanum*	eastern tent caterpillar	8/26/93	Illinois	PLA	Trailer	Henderson
A	*Solenopsis invicta*	red imported fire ant	8/26/93	Louisiana	LA	Truck	Hamashita
A	*Pseudaulacaspis cockerelli*	magnolia white scale	8/26/93	Florida	OR	*Ficus benjamina*	Fernandez
A	*Pseudaulacaspis cockerelli*	magnolia white scale	8/26/93?	Hawaii	LA	*Heliconia* sp.	Herrera
Q	*Technomyrmex albipes*	an ant	8/27/93	Hawaii	SAC	Cut florals	Hightower
Q	*Diploptera punctata*	Pacific beetle cockroach	8/27/93	Hawaii	LAK	House plant	Hajik
Q	*Pheidole megacephala*	bigheaded ant	8/27/93	Hawaii	LAK	House plant	Hajik
Q	*Sophonia* sp.	a leafhopper	8/27/93	Hawaii	LAK	House plant	Hajik
Q	*Prosapia* sp.	a spittlebug	8/27/93	Florida	SLO	*Pennisetum* sp.	Cairns
Q	*Aleurodicus dispersus*	spiraling whitefly	8/27/93	Hawaii	LA	*Cordyline terminalis*	Hamashita
B	*Ferrisia virgata*	striped mealybug	8/30/93	Florida	SJ	*Psidium* sp.	Reed/Allen
Q	*Palmicultor palmarum*	palm mealybug	8/30/93	Hawaii	SJ	*Cocos nucifera*	Allen
Q	*Philephedra tuberculosa*	a soft scale	8/30/93	Florida	SJ	*Psidium* sp.	Reed/Allen
A	*Pseudaulacaspis cockerelli*	magnolia white scale	8/30/93	Hawaii	SJ	*Cocos nucifera*	Reed/Allen
Q	*Aleurodicus dispersus*	spiraling whitefly	8/30/93	Hawaii	LA	Lalot	Herrera
Q	*Technomyrmex albipes*	an ant	8/30/93	Hawaii	LA	Cut florals	Herrera
A	*Pseudaulacaspis cockerelli*	magnolia white scale	8/30/93?	Hawaii	SDo	*Phoenix roebelenii*	Worchester
Q	*Diocalandra taitensis*	Tahitian coconut weevil	8/31/93	Hawaii	SJ	*Cocos nucifera*	Allen
Q	*Sinoxylon conigerum*	a false powderpost beetle	8/31/93	Thailand	SJ	Pallets	Angeles
A	*Solenopsis invicta*	red imported fire ant	8/31/93	Louisiana	SJ	Bagged rice	Watkins
Q	*Pheidole megacephala*	bigheaded ant	8/31/93	Hawaii	LA	Produce	Herrera
B	*Protopulvinaria pyriformis*	pyriform scale	9/1/93	Florida	SJ	*Capella* sp.	Reed
Q	*Sinoxylon conigerum*	a false powderpost beetle	9/1/93	Pakistan	LA	Dunnage	Azhar
A	*Pinnaspis strachani*	lesser snow scale	9/2/93	Hawaii	OR	*Cordyline terminalis*	Fernandez
A	*Solenopsis invicta*	red imported fire ant	9/3/93	Texas	STN	Pallets	Hains
Q	*Zachrysia provisoria*	a snail	9/3/93	Florida	SBo	Nursery stock	Davey
B	*Bradybaena similaris*	a snail	9/4/93	Fla	SLO	*Dracaena marginata*	Hall
Q	*Toumeyella* sp.	a soft scale	9/7/93	Grenada	SFo	*Spondias cytherea*	Azhar
Q	*Pseudococcus lycopodii*	clubmoss mealybug	9/7/93	Hawaii	LA	Cut florals	Herrera
A	*Aspidiotus destructor*	coconut scale	9/7/93	Florida	OR	*Annona* sp.	Fernandez
B	*Dysmicoccus alazon*	alazon mealybug	9/7/93	Florida	OR	*Annona* sp.	Fernandez
Q	*Technomyrmex albipes*	an ant	9/8/93	Hawaii	SAC	Cut florals	Hi
Q	*Aspidiotus excisus*	aglaonema scale	9/8/93	Costa Rica	SJ	*Aglaonema* sp.	Williamson
Q	*Chrysodeixis eriosoma*	green garden looper	9/8/93	Hawaii	LA	*Foeniculum vulgare*	?
Q	*Clastoptera* sp.	a spittlebug	9/8/93	Hawaii	LA	*Foeniculum vulgare*	?

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Q	*Technomyrmex albipes*	an ant	9/8/93	Hawaii	LA	Cut florals	Herrera
Q	*Malcosoma* sp.	a tent caterpillar	9/9/93	Pennsylvania	SAC	Household goods	Miller
Q	*Coccus viridis*	green scale	9/10/93	Hawaii	SFo	*Zingiber* sp.	Swanson
Q	*Kilifia acuminatus*	acuminate scale	9/10/93	Hawaii	SFo	*Zingiber* sp.	Swanson
A	*Pulvinaria psidii*	green shield scale	9/10/93	Hawaii	SFo	*Zingiber* sp.	Swanson
B	*Bradybaena similaris*	a snail	9/12/93	Florida	LA	*Ravenea rivularis*	Cassidy
Q	*Pseudococcus lycopodii*	clubmoss mealybug	9/12/93	Hawaii	OR	*Lycopodium* sp.	Fernandez
B	*Opeas* sp.	a snail	9/13/93	Hawaii	SMo	*Philodendron* sp.	Pendleton
Q	*Technomyrmex albipes*	an ant	9/13/93	Hawaii	LA	Cut florals	Herrera
Q	*Aleurodicus dispersus*	spiraling whitefly	9/14/93	Hawaii	ALA	Hala	Neklasan
B	*Bradybaena similaris*	a snail	9/14/93	Florida	VEN	*Ficus benjamina*	Kragh
Q	*Pheidole megacephala*	bigheaded ant	9/14/93	Hawaii	LA	*Zingiber* sp.	Awad
Q	*Veronicella* sp	a slug	9/14/93	Florida	VEN	*Spathyphyllum* sp.	Kragh
A	*Pinnaspis strachani*	lesser snow scale	9/15/93	Costa Rica	SJ	*Dracaena marginata*	Reed
Q	*Anoplolepis longipes*	longlegged ant	9/15/93	Hawaii	LA	*Zingiber* sp.	Awad
A	*Pseudaulacaspis cockerelli*	magnolia white scale	9/16/93	Hawaii	SDo	Cut florals	Persky
A	*Pseudaulacaspis cockerelli*	magnolia white scale	9/16/93	Hawaii	SDo	*Ravanea* sp.	Worchester
A	*Ischnaspis longirostris*	black thread scale	9/17/93	Hawaii	ALA	Maile/orchid	Neklason
A	*Pseudaulacaspis cockerelli*	magnolia white scale	9/17/93	Hawaii	ALA	Maile/orchid	Neklason
A	*Pseudaulacaspis cockerelli*	magnolia white scale	9/17/93	Florida	SDo	*Phoenix robelenii*	Matsumoto
Q	*Stephanitis* sp.	a lacebug	9/19/93	Hawaii	LA	Herbs	Cassidy
Q	*Arytaina genistae*	genista psyllid	9/20/93	Washington	STCL	*Cytisus scoparius*	Beauregard
A	*Solenopsis invicta*	red imported fire ant	9/20/93	Georgia	MER	Ladders	Parker
A	*Solenopsis invicta*	red imported fire ant	9/21/93	Georgia	STCL	Household goods	Clark
A	*Solenopsis invicta*	red imported fire ant	9/21/93	Texas	SDo	Freight	Persky
B	*Opeas* sp.	a snail	9/21/93	Florida	LA	*Phoenix roebelenii*	Sium
A	*Solenopsis invicta*	red imported fire ant	9/22/93	Texas	SBo	Trailer	McDonald
Q	*Technomyrmex albipes*	an ant	9/23/93	Hawaii	LA	Cut florals	Herrera
A	*Pinnaspis strachani*	lesser snow scale	9/23/93	Hawaii	LA	Cut florals	Herrera
A	*Pseudaulacaspis cockerelli*	magnolia white scale	9/23/93	Hawaii	LA	Cut florals	Herrera
A	*Pseudaulacaspis cockerelli*	magnolia white scale	9/23/93	Hawaii	SFo	Lalap	Lino
B	*Bradybaena similaris*	a snail	9/23/93	Hawaii	LA	*Dracaena marginata*	Cassidy
A	*Pulvinaria psidii*	green shield scale	9/23/93	Hawaii	ALA	Mendilla	Rushing
Q	*Technomyrmex albipes*	an ant	9/25/93	Hawaii	LA	*Zingiber* sp.	Awad
Q	*Anoplolepis longipes*	longlegged ant	9/27/93	Hawaii	SAC	Cut florals	Bianchi

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Q	*Coccus acutissimus*	acuminate scale	9/28/93	Hawaii	ALA	Sago palm	Neklason
Q	*Pheidole megacephala*	bigheaded ant	9/28/93	Hawaii	SMo	*Heliconia* sp.	Pendleton
A	*Howardia biclavis*	mining scale	9/28/93	Florida	OR	*Ficus benjamina*	Fernandez
Q	*Anoplolepis longipes*	longlegged ant	9/29/93	Hawaii	SAC	Cut florals	[illegible]
A	*Aspidiotus destructor*	coconut scale	9/29/93	Florida	LA	Areca palm	Awad
Q	*Pseudococcus* sp.	mealybug nymphs	9/29/93	Costa Rica	SDo	*Aglaonema* sp.	Desserich
B	*Bradybaena similaris*	a snail	9/30/93	Florida	OR	Areca palm	Clodt
Q	*Coccus viridis*	green scale	9/30/93	Hawaii	OR	*Alpinia purpurata*	Gibbs
Q	*Pheidole megacephala*	bigheaded ant	9/30/93	Hawaii	SJ	*Dracaena marginata*	Watkins
Q	*Rhytidoporus indentatus*	a burrowing bug	9/30/93	Hawaii	LA	Cut florals	Awad
Q	*Veronicella* sp.	a slug	10/1/93	Florida	SJ	Florals	Reed
Q	*Sinoxylon conigerum*	a false powderpost beetle	10/1/93	Malaysia	LA	Dunnage	Azhar
A	*Solenopsis invicta*	red imported fire ant	10/4/93	Alabama	SJ	Truck	Williamson
A	*Ceroplastes rubens*	red wax scale	10/5/93	Hawaii	STB	*Zingiber* sp.	Squires
Q	*Conotrachelus* sp.	a weevil	10/5/93	Cent. Amer.	SBo	*Ficus* sp.	Davey
Q	*Pinnaspis buxi*	boxwood scale	10/5/93	Hawaii	STB	*Pandanus* sp.	Squires
Q	*Aspidiotus excisus*	aglaonema scale	10/5/93	Costa Rica	SJ	*Aglaonema* sp.	Williamson
Q	*Pheidole megacephala*	bigheaded ant	10/5/93	Hawaii	LA	*Piper* sp.	Herrera
Q	*Sinoxylon conigerum*	a false powderpost beetle	10/5/93	India	LA	Dunnage	Azhar
Q	*Sinoxylon conigerum*	a false powderpost beetle	10/5/93	India	LA	Dunnage	Rabe
B	*Siphanta acuta*	torpedo bug	10/5/93	Hawaii	ALA	*Alyxia loiraeformis*	Eaton
A	*Aspidiotus destructor*	coconut scale	10/6/93	Florida	LA	Areca palm	Banta
A	*Pseudaulacaspis cockerelli*	magnolia white scale	10/6/93	Hawaii	OR	Palms	Gibbs
A	*Pseudaulacaspis cockerelli*	magnolia white scale	10/7/93	Hawaii	LA	*Heliconia* sp.	Herrera
A	*Pseudaulacaspis cockerelli*	magnolia white scale	10/7/93	Hawaii	ALA	*Alyxia loiraeformis*	Eaton
Q	*Technomyrmex albipes*	an ant	10/7/93	Hawaii	LA	*Heliconia* sp.	Herrera
Q	*Orchamoplatus mammaeferus*	croton whitefly	10/8/93	Hawaii	ALA	*Alyxia loiraeformis*	Neklason
A	*Pulvinaria psidii*	green shield scale	10/10/93	Hawaii	SMo	*Zingiber* sp.	Buerer
A	*Conotrachelus* sp.	a weevil	10/12/93	Illinois	OR	*Pyrus* sp.	Gibbs
Q	*Technomyrmex albipes*	an ant	10/12/93	Hawaii	LA	Cut florals	Mehraban
A	*Pulvinaria psidii*	green shield scale	10/13/93	Hawaii	SMo	*Zingiber* sp.	Garibaldi
A	*Aspidiotus destructor*	coconut scale	10/13/93	Hawaii	LA	Florals	Herrera
Q	*Orchamoplatus mammaeferus*	croton whitefly	10/13/93	Hawaii	OR	*Alyxia loiraeformis*	Wynn
Q	*Rhizoecus hibisci*	a soil mealybug	10/13/93	Hawaii	LA	*Rhapis excelsa*	Calicchia
Q	*Technomyrmex albipes*	an ant	10/13/93	Hawaii	LA	Cut florals	Herrera

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Q	*Aleurodicus dispersus*	spiraling whitefly	10/14/93	Hawaii	SDo	Palm	Ginsky
A	*Pulvinaria psidii*	green shield scale	10/14/93	Hawaii	STB	*Dracaena* sp.	Burke
B	*Ferrisia virgata*	striped mealybug	10/14/93	Costa Rica	SJ	Croton banana	Reed
A	*Pulvinaria psidii*	green shield scale	10/18/93	Cent. Amer	SMo	*Zingiber* sp.	Garibaldi
Q	*Aleurodicus dispersus*	spiraling whitefly	10/18/93	Hawaii	STB	*Cordyline terminalis*	Burke
Q	*Anoplolepis longipes*	longlegged ant	10/18/93	Hawaii	SAC	Cut florals	Bianchi
Q	*Sinoxylon conigerum*	a false powderpost beetle	10/18/93	Taipei	LA	Dunnage	Laurich
B	*Ferrisia virgata*	striped mealybug	10/20/93	Costa Rica	SJ	*Codiaeum* sp.	Williamson
Q	*Pinnaspis buxi*	boxwood scale	10/20/93	Hawaii	ALA	*Cordyline terminalis*	Eaton
A	*Pinnaspis strachani*	lesser snow scale	10/20/93	Costa Rica	SJ	*Dracaena marginata*	Reed

BORDER STATIONS

In the last issue of CPPDR we mentioned the interception of Mediterannean fruit fly larvae entering California in sugar apple fruit purchased in Canada. While that interception was the first Medfly find at a Border Station, the following find was not the first for Oriental fruit fly. It does, however, serve to illustrate the deterrent powers of the stations in the fight against exotics.

ORIENTAL FRUIT FLY, *Bactrocera dorsalis*, -(A)- Two Oriental fruit fly (OFF) larvae, one live and one dead, were found in longan fruit at the Hornbrook Station. The five pounds of fruit, which had been purchased in Canada by San Francisco residents who were returning home, was discovered during a routine inspection by PQI Glen Hirsch. The only other OFF intercepted at a border were by PQI Leslee Gamlin at the old Mt. Shasta Station on September 12, 1984, when live larvae were found in unknown exotic fruit, purchased in Canada, destined for San Jose.

Another important find and a first Border Station record is the shellfish discussed below:

ZEBRA MUSSEL, *Dreissena polymorpha*, -(Q)- Dead *Dreissena polymorpha*, the fresh water zebra mussel, adults were found at the Needles Station attached to the hull of a Michigan sailboat that had been used in Lake Erie. The following report by Dick Brown of the Exclusion staff adds some significance to this interception:

> This mussel was first recorded in 1771 from the Caspian Sea and Ural River. By the mid-1800's it had spread throughout Europe. It was first reported in North America in 1988 from Lake St. Clair. By 1990, all of the Great Lakes were infested. By 1993, the Mississippi River drainage system, as well as the Hudson River, were reported as infested (see map on next page).
>
> The bivalve adult zebra mussels are sexually mature the second year (of a five year life span) and each female produces 30,000 to 40,000 eggs each year. The free swimming larvae (veligers) may remain mobile for 8 to 21 days prior to settling. Zebra mussels are capable of anaerobic metabolism and may survive 3 to 4 days in anaerobic conditions. Under ideal cool, wet conditions, the adults may survive out of water for up to two weeks.
>
> Densities of up to 700,000 adult zebra mussels per square meter have been recorded on a power plant intake in Lake Erie. Colonies may build up to a thickness of 1.5 meters (5 feet).
>
> A possible method of introduction of the zebra mussel into California would be by the adults attaching to a boat hull, or the veligers swimming in a bait container or within the cooling system of a pleasure boat.
>
> This interception of zebra mussel is a first time border station record. Also, this organism has not been recorded from a California collection.

ZEBRA MUSSEL DISTRIBUTION IN THE UNITED STATES

September 10, 1993

Impacted State

General Zebra Mussel Sightings

Appearance of Zebra Mussel, *Dreissena polymorpha*

— BOTANY HIGHLIGHTS —

HYDRILLA, *Hydrilla verticillata*, -(A)- Back in 1977, hydrilla was found in a Fallbrook, **San Diego** County, area pond. Since then, treatment has been completed by CDFA and County personnel and regular monitoring has been conducted. No hydrilla has been detected in the last three years in the one acre pond and San Diego County personnel have requested that this site be declared eradicated. For an updated California map of hydrilla, see the following page.

SKELETONWEED, *Chondrilla juncea*, -(A)- Skeletonweed has been found at Upper Lake, **Mendocino** County, marking a new township record and only the second time that this weed has been found in the county. Robin Breckenridge made the find on October 1. The current map is located on page 136.

DIFFUSE KNAPWEED, *Centaurea diffusa*, -(A)- Robin Breckenridge also found a new township location of diffuse knapweed in Laytonville, **Mendocino** County, on September 30. See the map on page 137 for the latest find.

SMOOTH DISTAFF THISTLE, *Carthamus baeticus*, -(B)- An updated map of smooth distaff thistle is also included in this issue following the previous weed maps.

NOTICE OF REVISION

HANDBOOK 25

The third revision of Uniform Classification of Weed and Crop Seeds has just been published. Also known as Handbook 25, this document was first published in 1952 with a fairly simple classification scheme of contaminating seed species. The goals of this third revision, as listed in the introduction of the manuscript, are to develop a better system for classifying contaminating species as other crop or weed seed, to make a list of species more comprehensive, to bring nomenclature up to date, and to provide a comprehensive reference source to nomenclature. The main reference for nomenclature is the GRIN (Germplasm Resources Information Network) database.

For more information about Handbook 25 contact:

ASSOCIATION OF OFFICIAL SEED ANALYSTS, INC.
c/o Larry J. Prentice, Sec/Treasurer
268 Plant Science Bldg, IANR - UNL
Lincoln, NE 68583-0911 USA

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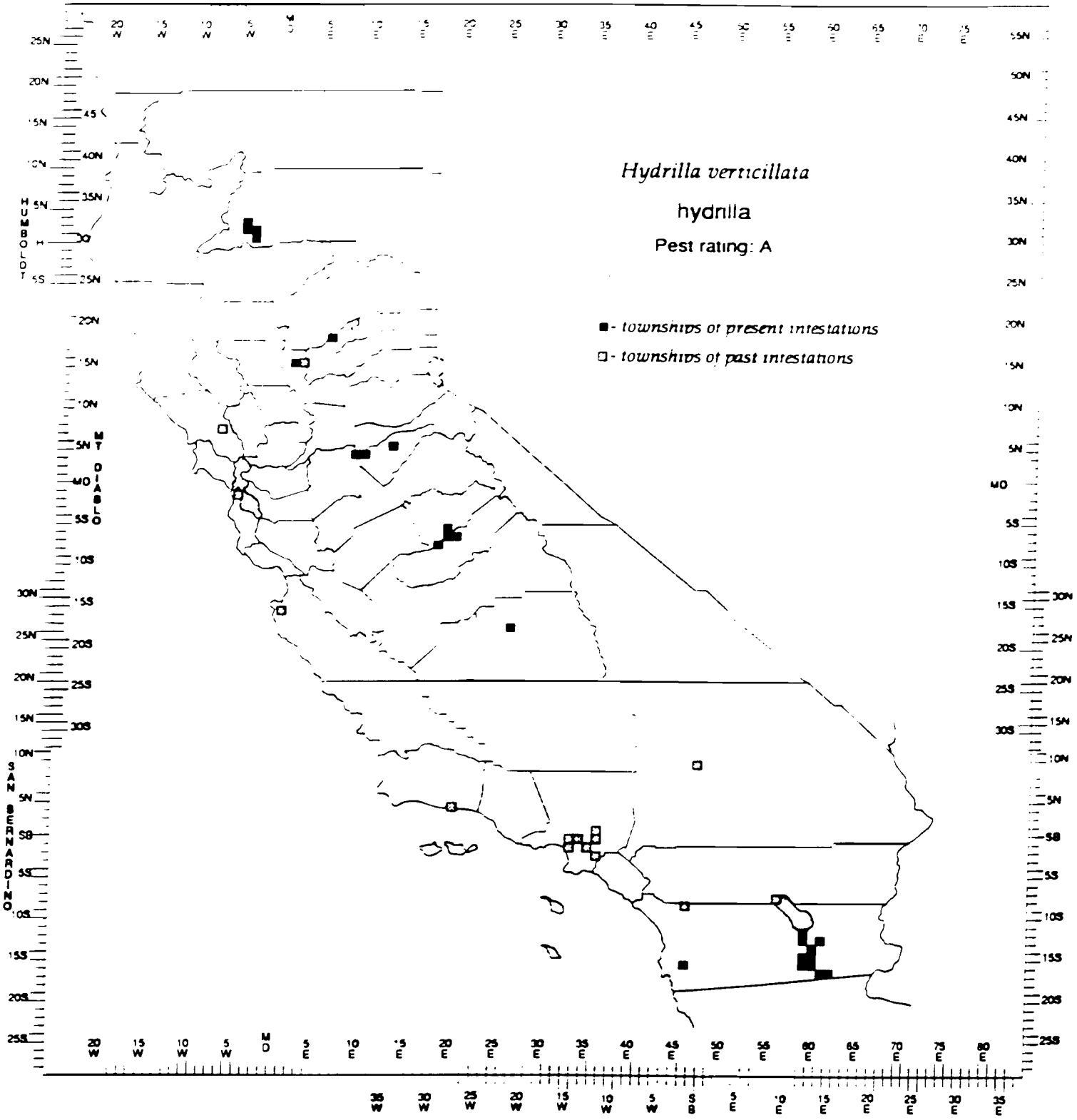

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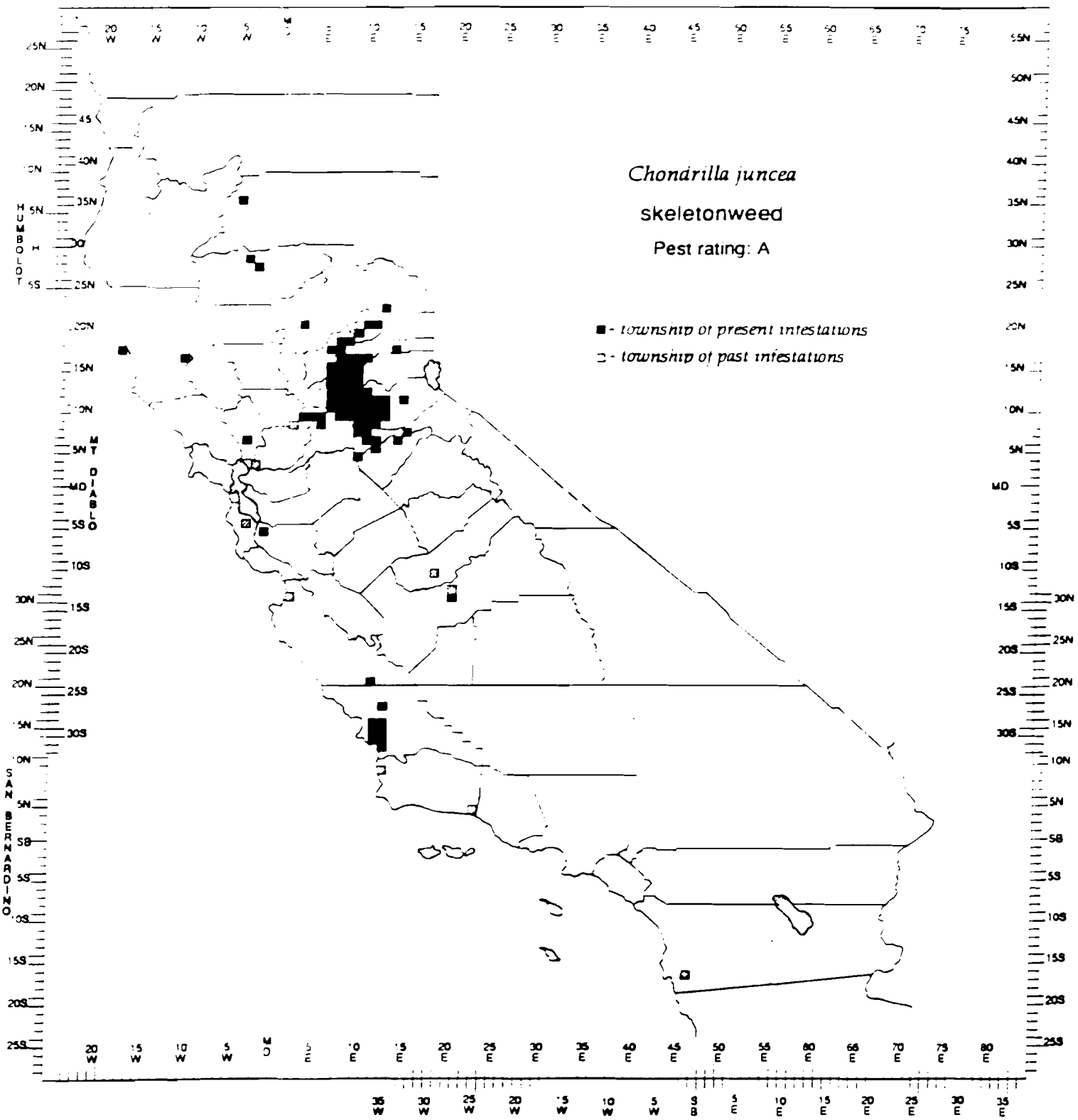

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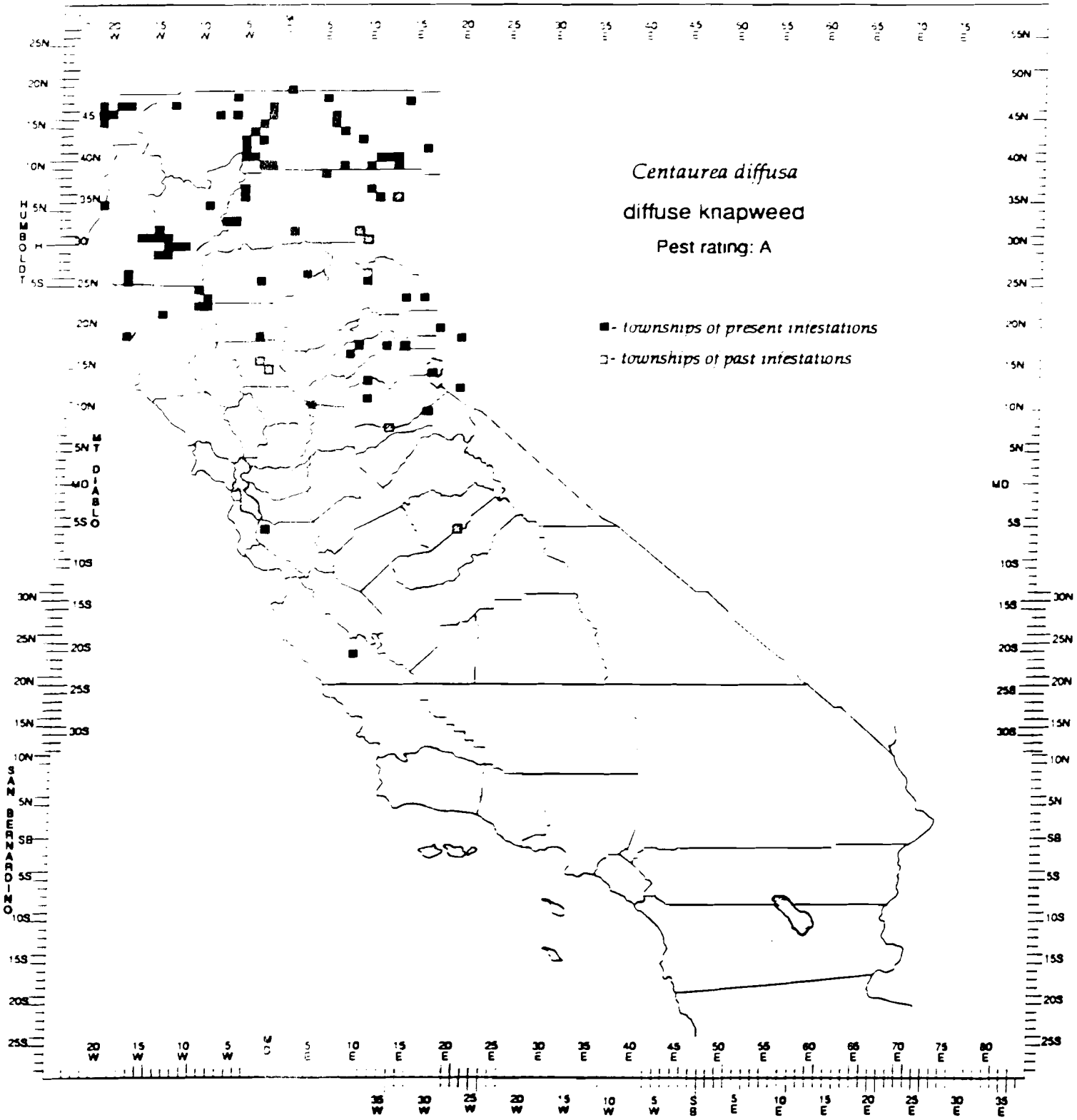

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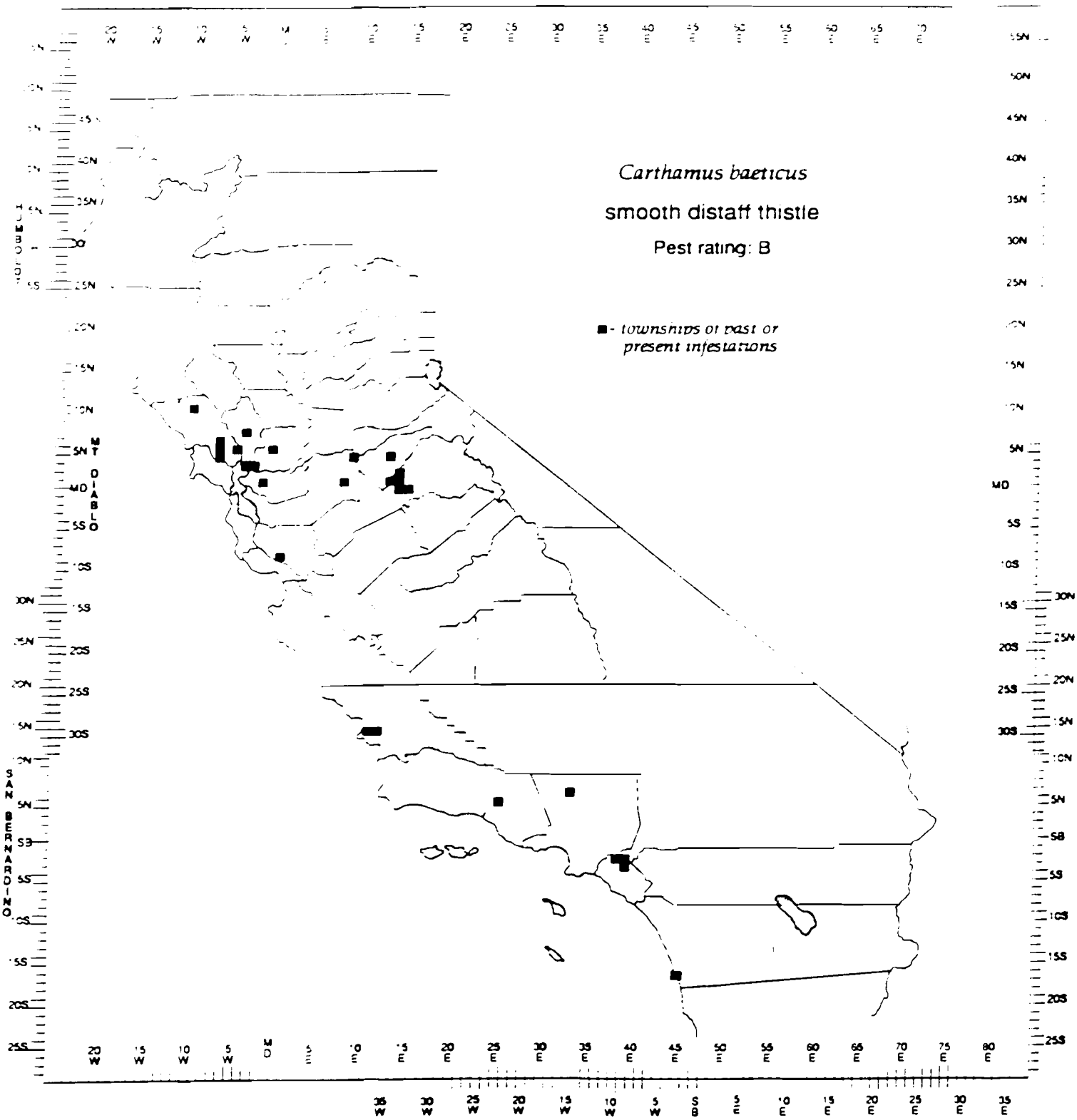


PLANT PATHOLOGY HIGHLIGHTS

First Report of Wisteria Gall in California

by
Dan Opgenorth, Anna Sauber and Joel King

In spring of 1993 a Wisteria sample having an interesting overgrowth (gall condition) was submitted for identification from Napa County. The galls were golf ball size with the typical disorganized texture of crown gall. However, these galls occurred at a considerable distance above the ground.

The gall tissue was surface sterilized, macerated and dilutions were plated on RS and King's B media; as for a typical crown gall sample. After several days a yellow bacterial colony appeared on the King's B media but no growth was evident on the more selective RS agar. Assuming the yellow colonies to represent a contaminant, the work was repeated. The results were exactly the same. The lack of bacterial growth on the RS media indicated that *Agrobacterium* was not present and this disease condition was not crown gall.

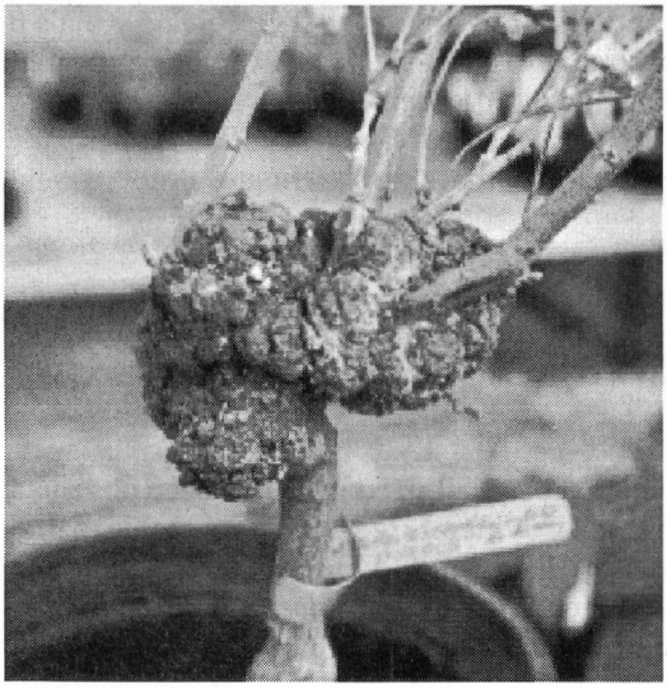
A similar sample of Wisteria gall was submitted from Sacramento County about two months later. This had the same appearance as previous samples from Napa. Similar techniques produced like results: no *Agrobacterium* was isolated but a yellow "contaminant" consistently was associated with the gall.

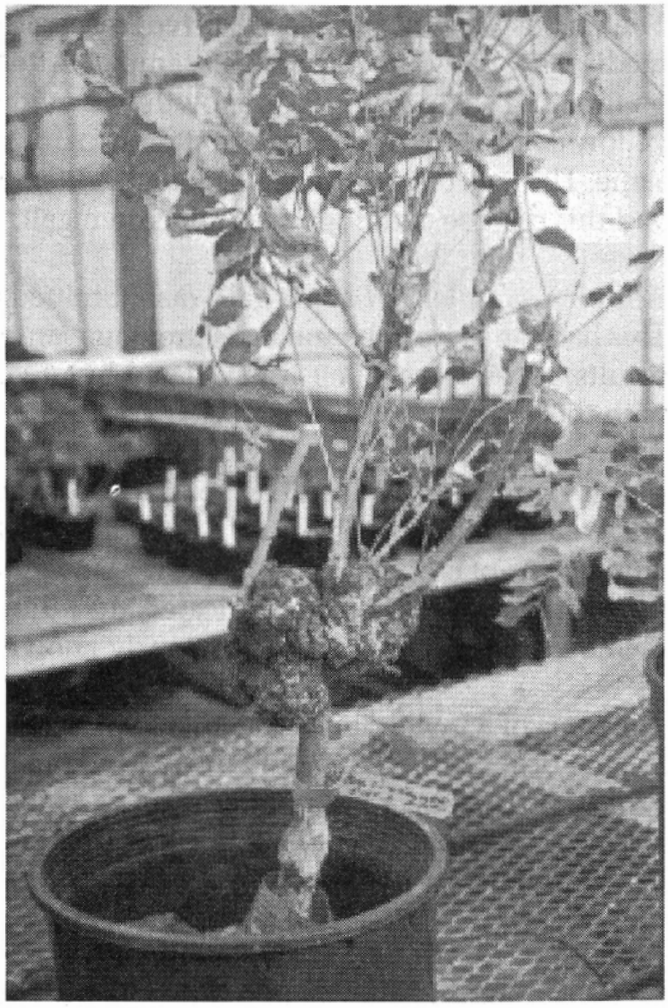
Marin County Agricultural Personnel also indicated that baseball sized galls had been observed on container grown Wisteria at a retail nursery (Figure 1). A literature search was unable to find any reports of crown gall on Wisteria. However, use of the recently acquired BIOLOG® system for bacterial identification indicated that the yellow cultures were *Pantoea agglomerans.* No members of this genus were previously known to be plant pathogens.

The topic of a mysterious Wisteria gall was later discussed with Professor Yuichi Takikawa. On a sabbatical from Shizuoka University in Japan, Dr. Takikawa was working at U. C. Berkeley. Professor Takikawa seemed familiar with the disease. This was a disease problem given to Japanese students for practice in bacterial identification. He indicated that what was thought to be a contaminant was probably *Erwinia herbicola,* which is the pathogen that causes Wisteria gall in Japan.

As a result of this information, the unknown yellow bacteria were transfered to MS media and grew with the typical orange response of *Erwinia herbicola* in three days. Wisteria plants were inoculated with this bacterium at Berkeley and in Sacramento to prove pathogenicity. Small galls began to form in a few weeks. A check of recent literature revealed that *Pantoea agglomerans* was a newly proposed synonym for *Erwinia herbicola* pv. *millettiae,* which had previously been identified as the cause of galls on Wisteria in Japan. Additional work at U. C. Berkeley has shown that some of the strains have a unique gene for the production of IAA (indoleacetic acid), which may be responsible for the rapid gall formation.

Previously, this disease was not found in North America but was common in Japan and the Orient. The pathogen has been given a "Q" rating by the California Department of Food and Agriculture. While the disease may be systemic, the spread is believed to be through pruning wounds and wind blown rain. Since the disease problem is now easily identified, we would like to know if other areas of the state also have this disease on Wisteria. County biologists are encouraged to watch for this problem and submit samples of any Wisteria galls observed. The information developed would enable us to assign a permanent pest rating.





Figures 1 & 2. Baseball sized galls on container grown *Wisteria sinensis*.

Index of Plant Virus, Viroid, and Mycoplasma-like Diseases in California
December 1993

Dennis E. Mayhew and Amy L. Wiens, CDFA Plant Virology Laboratory

The purpose of this index is to provide updated information about plant diseases caused by viruses, viroids, and mycoplasma-like organisms that are known to occur in California. The major source of the reports are the official files of the California Department of Food and Agriculture. These reports are the result of disease diagnoses made by a number of plant pathologists working for the Department or the University of California since 1950. In addition, reports listed in a number of references have been included if specific locations in California have been mentioned. Many original diagnoses are included under the currently acceptable synonym for the virus or disease named. With each report, the county or counties in which the diseases have occurred are included by number:

1. Alameda
2. Alpine
3. Amador
4. Butte
5. Calaveras
6. Colusa
7. Contra Costa
8. Del Norte
9. El Dorado
10. Fresno
11. Glenn
12. Humboldt
13. Imperial
14. Inyo
15. Kern
16. Kings
17. Lake
18. Lassen
19. Los Angeles
20. Madera
21. Marin
22. Mariposa
23. Mendocino
24. Merced
25. Modoc
26. Mono
27. Monterey
28. Napa
29. Nevada
30. Orange
31. Placer
32. Plumas
33. Riverside
34. Sacramento
35. San Benito
36. San Bernardino
37. San Diego
38. San Francisco
39. San Joaquin
40. San Luis Obispo
41. San Mateo
42. Santa Barbara
43. Santa Clara
44. Santa Cruz
45. Shasta
46. Sierra
47. Siskiyou
48. Solano
49. Sonoma
50. Stanislaus
51. Sutter
52. Tehama
53. Trinity
54. Tulare
55. Tuolumne
56. Ventura
57. Yolo
58. Yuba

Those diseases reported in more than eight counties are listed as statewide. For some reports, no specific location is designated, only the state is mentioned. Location for these reports is listed as CA.

Abutilon sp.	Malvaceae	
abutilon mosaic		31;38
Aeranthus Henricl	Orchidaceae	
cymbidium mosaic		34
Aeschynanthus sp.	Gesneriaceae	
tomato spotted wilt		43
Ajuga sp.	Lamiaceae	
alfalfa mosaic		37;43
Allium cepa	Liliaceae	
onion yellow dwarf		13;16;24;37.
Allium sativum	Liliaceae	
garlic yellow stripe		10;45
onion yellow dwarf		13;35;37
Alstroemeria sp.	Alstromeriaceae	
hippeastrum mosaic		37;43;44
Amaranthus caudatus	Amaranthaceae	
beet curly top		CA
Amaranthus graecizans	Amaranthaceae	
beet curly top		CA
tomato spotted wilt		CA
Amaranthus retroflexus	Amaranthaceae	
aster yellows		45
beet curly top		CA
Amaranthus sp	Amaranthaceae	
beet curly top		CA
Amaryllis belladonna	Amaryllidaceae	
tomato spotted wilt		CA
Amaryllis hybrida	Amaryllidaceae	
hippeastrum mosaic		15;19;36
Amaryllis sp.	Amaryllidaceae	
hippeastrum mosaic		19;30
tomato spotted wilt		39
Ammi majus	Apiaceae	
celery mosaic		27
Anemone coronaria	Ranunculaceae	
aster yellows		CA
Anemone sp.	Ranunculaceae	
anemone mosaic		37
tobacco necrosis		07
tobacco ringspot		07
Antirrhinum majus	Scrophulariaceae	
cucumber mosaic		41
Apium graveolens	Apiaceae	
aster yellows		40;42;56
celery mosaic		27;40;44;54;56
celery yellow spot		CA
hemlock ringspot		CA
western cucumber mosaic		27;54
Apium graveolens var. *dulce*	Apiaceae	
aster yellows		01;07;27;39;40;42;43;56
beet curly top		CA
celery mosaic		07;19;27;34;35;40;42;56
cucumber mosaic		40;42;43;48
tomato spotted wilt		43

Aquilegia sp.	Ranunculaceae	
cucumber mosaic		43
Aralia sp.	Araliaceae	
tomato spotted wilt		CA
Armoracia rusticana	Brassicaceae	
beet curly top		CA
Ascocenda sp.	Orchidaceae	
Odontoglossum ringspot		07
Asparagus officinalis	Liliaceae	
asparagus virus		33
asparagus virus II		CA
Asplenium bulbiferum	Aspleniaceae	
tomato spotted wilt		37
Asplenium nidus	Aspleniaceae	
tomato spotted wilt		37
Aster sp.	Asteraceae	
aster yellows		01
tomato spotted wilt		CA
Avena byzantina	Poaceae	
barley yellow dwarf		10
Avena fatua	Poaceae	
oat mosaic		50;57
Avena sativa	Poaceae	
barley yellow dwarf		Statewide
oat mosaic		07;20
wheat streak mosaic		57
Avena sp.	Poaceae	
barley yellow dwarf		Statewide
Babiana sp.	Iridaceae	
iris mild mosaic		CA
Begonia tuberhybrida	Begoniaceae	
tomato spotted wilt		04;41;44
Begonia sp.	Begoniaceae	
cucumber mosaic		37;43;44
turnip mosaic		30
Beta vulgaris	Chenopodiaceae	
beet curly top		13;34;40;42;48;57
beet mosaic		Statewide
beet necrotic yellow vein		27;42;57
beet ring mottle		27
beet rosette		CA
beet western yellows		39;43;57
beet yellow net		Statewide
beet yellow vein		33;39
beet yellows		06;57
Beta vulgaris var. *cicla*	Chenopodiaceae	
beet curly top		06;34;39;42;57
beet mosaic		21;31;39;41
beet yellow net		19;48;57
beet yellows		34;39;43
cucumber mosaic		27
tomato spotted wilt		07
Brassavola glauca	Orchidaceae	
cymbidium mosaic		41

Brassavola tuberculata	Orchidaceae	
cymbidium mosaic		07
Brassica campestris	Brassicaceae	
turnip mosaic		43
Brassica chinensis	Brassicaceae	
turnip mosaic		19
Brassica oleracea var. *acephala*	Brassicaceae	
turnip mosaic		15
Brassica oleracea var. *alboglabra*	Brassicaceae	
turnip mosaic		57
Brassica oleracea var. *botrytis*	Brassicaceae	
aster yellows		43
cauliflower mosaic		01;13;35;40;42;57
turnip mosaic		30;43;57
Brassica oleracea var. *capitata*	Brassicaceae	
aster yellows		19;40;50
cauliflower mosaic		37
turnip mosaic		19;34;41;50;57
Brassica oleracea var. *gemmifera*	Brassicaceae	
cauliflower mosaic		43
turnip mosaic		41;57
Brassica oleracea var. *gongylodes*	Brassicaceae	
turnip mosaic		10
Brassica rapa	Brassicaceae	
beet curly top		CA
cauliflower mosaic		40;42
tobacco streak		CA
turnip mosaic		10;19;42;43;56
Brassica sp.	Brassicaceae	
turnip mosaic		56
Brassolaelia cattleya	Orchidaceae	
cymbidium mosaic		34
Bromus mollis	Poaceae	
sugarcane mosaic A		57
Bromus rigidus	Poaceae	
barley yellow dwarf		24
Browallia speciosa	Solanaceae	
tomato spotted wilt		37
Browallia sp.	Solanaceae	
tomato spotted wilt		CA
Buddleia davidii	Buddleiaceae	
cucumber mosaic		19
Calceolaria sp.	Scrophulariaceae	
tomato spotted wilt		CA
Calendula officinalis	Asteraceae	
tomato spotted wilt		CA
Callistephus chinensis	Asteraceae	
aster yellows		04;43
tomato spotted wilt		CA
Camellia japonica	Theaceae	
camellia yellow mottle		09;12;34;37;42;44;49
Campanula medium	Campanulaceae	
tomato spotted wilt		CA
Canna generalis	Cannaceae	
canna mosaic		37;38;39

Canna pfeizer	Cannaceae	
canna mosaic		37
Capsella bursa-pastoris	Brassicaceae	
beet curly top		CA
Capsicum annuum	Solanaceae	
alfalfa mosaic		39;43
cucumber mosaic		CA
potato virus X		CA
potato virus Y		CA
potato virus Y		37
tobacco etch		CA
tobacco mosaic		30
tobacco rattle		CA
tomato spotted wilt		CA
Capsicum frutescens	Solanaceae	
alfalfa mosaic		Statewide
beet curly top		10;27;39;43;54
cucumber mosaic		24;27;43;45;54;57
potato virus X		39
potato virus Y		43;57
tobacco etch		10;37;39;43;50;54;56;57
tobacco mosaic		56
tobacco rattle		42;56
tomato spotted wilt		19;24;39;42;43
Capsicum frutescens var. *grossum*	Solanaceae	
alfalfa mosaic		39
beet curly top		10;39;43;50
cucumber mosaic		10;34;43
potato virus X and tobacco mosaic		50
tobacco etch		24;43;50;56
Capsicum frutescens var. *longum*	Solanaceae	
alfalfa mosaic		39;43
beet curly top		10;27;39;43
cucumber mosaic		35;43
tobacco etch		39;56
tobacco mosaic		43;56
tomato spotted wilt		39
Capsicum sp.	Solanaceae	
pepper mottle		13;39;54
tobacco etch		27;39;48;56;57
tobacco rattle		40
tomato spotted wilt		CA
Carica papaya	Caricaceae	
big bud		CA
Carthamus tinctorius	Asteraceae	
alfalfa mosaic		13
cucumber mosaic		34;39;48
lettuce mosaic		13
turnip mosaic		39
Catasetum pileatum	Orchidaceae	
Odontoglossum ringspot		38
Cattleya labiata	Orchidaceae	
cymbidium mosaic		38
Cattleya sp.	Orchidaceae	
cymbidium mosaic		Statewide
Odontoglossum ringspot		Statewide

Celosia argentea	Amaranthaceae	
beet curly top		CA
Cerastium arvense	Caryophyllaceae	
tomato spotted wilt		CA
Ceropegia lineoris	Asclepiadaceae	
tomato spotted wilt		30
Chenopodium ambrosioides	Chenopodiaceae	
beet curly top		CA
Chenopodium leptophyllum	Chenopodiaceae	
beet curly top		CA
Chenopodium murale	Chenopodiaceae	
beet curly top		CA
Chiococca alba	Rubiaceae	
alfalfa mosaic		48
Chrysanthemum coronarium	Asteraceae	
beet curly top		CA
Chrysanthemum frutescens	Asteraceae	
beet curly top		CA
Chrysanthemum morifolium	Asteraceae	
tomato spotted wilt		56
Chrysanthemum sp.	Asteraceae	
aster yellows		CA
chrysanthemum stunt		CA
chrysanthemum virus B		19;24;27;42;43;44
tomato aspermy		28;43
tomato spotted wilt		27;37;42;43;44;56
Cichorium endivia	Asteraceae	
aster yellows		27
tomato spotted wilt		10
Cichorium intybus	Asteraceae	
tomato spotted wilt		CA
Cineraria sp.	Asteraceae	
tomato spotted wilt		43
Cirrhopetalum sp.	Orchidaceae	
cymbidium mosaic		07
Citrofortunella floridana	Rutaceae	
citrus vein yellowing		33
Citrullus lanatus	Cucurbitaceae	
beet curly top		CA
cucumber mosaic		11
squash leaf curl		13
squash mosaic		06;11;13;31
watermelon mosaic		06;07;11;13;34;42;51;57
zucchini yellow mosaic		13;33
Citrullus sp.	Cucurbitaceae	
cucumber mosaic		11;24
squash mosaic		11;24
watermelon mosaic		24
Citrus aurantifolia	Rutaceae	
cachexia		CA
citrus exocortis		CA
citrus vein enation		CA
citrus vein yellowing		CA
concave gum		CA
xyloporosis		CA

Citrus aurantium	Rutaceae	
citrus crinkly leaf		CA
citrus dwarf		CA
citrus vein enation		CA
concave gum		CA
Citrus limon	Rutaceae	
citrus blind pocket		CA
citrus crinkly leaf		CA
citrus dwarf		34
citrus infectious variegation		CA
citrus ringspot		CA
citrus tatterleaf		CA
citrus vein enation		CA
citrus vein yellowing		CA
concave gum		CA
Citrus macrophylla	Rutaceae	
citrus vein yellowing		CA
Citrus medica	Rutaceae	
citrus exocortis		CA
citrus vein yellowing		CA
Citrus paradisi	Rutaceae	
citrus dwarf		CA
citrus psorosis A		CA
citrus psorosis B		CA
Citrus reticulata	Rutaceae	
cachexia		CA
citrus blind pocket		CA
citrus psorosis A		CA
citrus psorosis B		CA
concave gum		CA
Citrus reticulata X *C. paradisi*	Rutaceae	
cachexia		CA
citrus vein yellowing		CA
xyloporosis		CA
Citrus reticulata X *C. sinensis*	Rutaceae	
dweet mottle		CA
Citrus sinensis	Rutaceae	
citrus blind pocket		CA
citrus crinkly leaf		CA
citrus psorosis		21;34;39;50
citrus psorosis A		19;30
citrus psorosis B		CA
citrus tristeza		Statewide
citrus vein enation		CA
concave gum		CA
Citrus sp.	Rutaceae	
citrus psorosis		43
citrus stubborn		CA
citrus vein enation		CA
Coelogyne sp.	Orchidaceae	
cymbidium mosaic		34
Odontoglossum ringspot		34
Conium maculatum	Apiaceae	
celery mosaic		56
hemlock ringspot		CA

Consolida ambigua	Ranunculaceae	
beet curly top		CA
Coreopsis tinctoria	Asteraceae	
beet curly top		CA
Coriandrum sativum	Apiaceae	
hemlock ringspot		CA
Cosmos bipinnatus	Asteraceae	
beet curly top		CA
Cotoneaster lacteus	Rosaceae	
prunus necrotic ringspot		CA
Cotoneaster Parneyi	Rosaceae	
prunus necrotic ringspot		49
Crocosmia crocosmaeflora	Iridaceae	
bean yellow mosaic		CA
Crossandra infundibuliformis	Acanthaceae	
tobacco mosaic		37
Cucumis melo	Cucurbitaceae	
beet curly top		11
cucumber mosaic		04;12
lettuce infectious yellows		13
muskmelon necrotic spot		33
squash mosaic		04;06;11;13;34;51;57
veinal necrosis		CA
watermelon mosaic		10;51
Cucumis melo cv 'topmark'	Cucurbitaceae	
zucchini yellow mosaic		13;33
Cucumis melo var. *cantalupensis*	Cucurbitaceae	
alfalfa mosaic		51
cucumber mosaic		13;31;52
papaya ringspot		6;33
squash mosaic		04;06;13;50;51
watermelon mosaic		Statewide
zucchini yellow mosaic		13
Cucumis melo var. *inodorus*	Cucurbitaceae	
muskmelon vein necrosis		50
squash mosaic		06;13;24;39;57
watermelon mosaic		13
Cucumis melo var. *reticulatus*	Cucurbitaceae	
cucumber mosaic		06
squash mosaic		06
watermelon mosaic		06
Cucumis sativus	Cucurbitaceae	
cucumber mosaic		Statewide
squash mosaic		06;23;24;41;50;51
tomato spotted wilt		31
watermelon mosaic		06;10;24;37;43;56;57
zucchini yellow mosaic		11
Cucurbita maxima	Cucurbitaceae	
cucumber mosaic		13
squash leaf curl		13;33
squash mosaic		13;34;51;56
watermelon mosaic		13;51
Cucurbita moschata	Cucurbitaceae	
squash mosaic		13;34;51

Cucurbita pepo	Cucurbitaceae	
cucumber mosaic		04;51
squash leaf curl		13
squash mosaic		13;43
watermelon mosaic		Statewide
Cucurbita pepo var. *medullosa*	Cucurbitaceae	
squash mosaic		06;12;34;35;56
Cucurbita pepo var. *melopepo*	Cucurbitaceae	
cucumber mosaic		12;23
squash mosaic		Statewide
watermelon mosaic		24;37;39;49
Cucurbita sp.	Cucurbitaceae	
aster yellows		42
beet curly top		06;11;58
cucumber mosaic		06;07;24;27;52;57
cucurbit aphid-borne yellows		50
squash leaf curl		13;33
squash mosaic		Statewide
tomato spotted wilt		06
watermelon mosaic		Statewide
Cuphea Hookerana	Lythraceae	
tobacco ringspot		57
Cuscuta californica	Convolvulaceae	
dodder latent mosaic		33
Cyamopsis tetragonoloba	Fabaceae	
beet curly top		CA
Cydonia oblonga	Rosaceae	
quince sooty ringspot		31
Cymbidium sp.	Orchidaceae	
cymbidium mosaic		Statewide
Odontoglossum ringspot		Statewide
Cynara scolymus	Asteraceae	
artichoke curly dwarf		27
artichoke mosaic		42
Cypripedium sp.	Orchidaceae	
cymbidium mosaic		19
Dahlia variabilis	Asteraceae	
dahlia mosaic		18;19;28;34;43;44
Daphne sp.	Asteraceae	
daphne virus X		34
Datura sp.	Solanaceae	
tobacco etch		57
tomato spotted wilt		43
Daucus carota	Apiaceae	
alfalfa mosaic		50
aster yellows		34;37
carrot motley dwarf		10;13;27;39;56;57
carrot mottle		CA
celery mosaic		CA
hemlock ringspot		CA
Daucus carota var. *sativa*	Apiaceae	
carrot motley dwarf		42
carrot red leaf		10
Delphinium sp.	Ranunculaceae	
tomato spotted wilt		CA

Dendrobium sp.	Orchidaceae	
cymbidium mosaic		19;34;43
Odontoglossum ringspot		34
Dianthus caryophyllus	Caryophyllaceae	
beet curly top		CA
carnation etched ring		01;27;37;41
carnation latent		41
carnation mottle		01;27;37;41;43;44
carnation necrotic fleck		01;27;37;41;42;43;44
Dianthus caryophyllus var. *tepsa*	Caryophyllaceae	
carnation mottle		27;37
Dianthus plumarius	Caryophyllaceae	
beet curly top		CA
Dianthus sp.	Caryophyllaceae	
carnation mosaic		27
carnation ringspot		CA
tomato spotted wilt		43
Dichondra repens	Convolvulaceae	
cucumber mosaic		57
Dieffenbachia picta	Araceae	
dasheen mosaic		37
Dieffenbachia sp.	Araceae	
tomato spotted wilt		CA
Digitaria sanguinalis	Poaceae	
sugarcane mosaic A		10;57
Dipsacus fullonum	Dipsacaceae	
teasel mosaic		CA
tomato ringspot		38
Discocactus ramulosa	Cactaceae	
cactus X		CA
Echinochloa crus-galli	Poaceae	
sugarcane mosaic A		54
Emilia sagittata	Asteraceae	
tomato spotted wilt		CA
Epicattleya sp.	Orchidaceae	
Odontoglossum ringspot		19
Epidendrum cillare	Orchidaceae	
cymbidium mosaic		07
Epidendrum sp.	Orchidaceae	
cymbidium mosaic		07;34;38
Odontoglossum ringspot		38;57
Epiphronitis Veitchii	Orchidaceae	
Odontoglossum ringspot		34
Epiphyllum hy. 'Rainbow Beauty'	Cactaceae	
cactus X		CA
Epiphyllum sp.	Cactaceae	
cactus X		CA
Eragrostis diffusa	Poaceae	
sugarcane mosaic A		10
Erigeron glaucus	Asteraceae	
tomato ringspot		38
Eriochloa gracilis	Poaceae	
barley yellow dwarf		10
Erodium cicutarium	Geraniaceae	
beet curly top		CA

Erodium moschatum	Geraniaceae	
beet curly top		CA
filaree red leaf		27
Erysimum capitatum	Brassicaceae	
tomato spotted wilt		CA
Eucharis grandiflora	Amaryllidaceae	
hippeastrum mosaic		CA
tomato spotted wilt		CA
Euphorbia pulcherrima	Euphorbiaceae	
poinsettia mosaic		01;07
Ficus benjamina	Moraceae	
fig mosaic		Statewide
Ficus carica	Amaryllidaceae	
fig mosaic		40;42
Ficus pandulata	Amaryllidaceae	
fig mosaic		43
Ficus sp.	Amaryllidaceae	
fig mosaic		31
Fragaria chiloensis	Rosaceae	
strawberry yellow edge		34
tomato ringspot		38
Fragaria X *ananassa*	Rosaceae	
aster yellows		19;45;52
strawberry crinkle		36
strawberry vein-banding		19;37
strawberry yellow edge		37;39
strawberry yellows		19;34
Freesia sp.	Iridaceae	
bean yellow mosaic		01;12;27;37;43;44
cucumber mosaic		01;37
Fritillaria sp.	Liliaceae	
bean yellow mosaic		43
Fuchsia hybrida	Onagraceae	
tomato spotted wilt		CA
Gaillardia aristata	Asteraceae	
tomato spotted wilt		CA
Gazania sp.	Asteraceae	
biden's mottle		19;30;37;42;56
sonchus yellow net		19;30;37;42;56
sowthistle yellow vein		56
Gerbera sp.	Asteraceae	
tomato spotted wilt		43
Gladiolus X *hortulanus*	Iridaceae	
aster yellows		34
bean yellow mosaic		01;34;44;56
cucumber mosaic		23;28;34;47
gladiolus mosaic		44
Gloriosa sp.	Liliaceae	
biden's mottle		1
Gloxinia sp.	Gesneriaceae	
tomato spotted wilt		34
Gnaphalium sp.	Asteraceae	
beet curly top		CA
Godetia grandiflora	Onagraceae	
tomato spotted wilt		CA

Gossypium hirsutum	Malvaceae	
cotton leaf crumple		CA
Graptopetalum pentadrum	Crassulaceae	
saguaro cactus		CA
Haemanthus sp.	Amaryllidaceae	
lily symptomless		30
Hatiora herminae	Cactaceae	
cactus X		CA
Helianthus annuus	Asteraceae	
aster yellows		CA
Helichrysum bracteatum	Asteraceae	
beet curly top		CA
Hibbertia sp.	Dilleniaceae	
cucumber mosaic		CA
Hibiscus trionum	Malvaceae	
malva vein clearing		CA
Hordeum vulgare	Poaceae	
barley stripe mosaic		47;52
barley yellow dwarf		Statewide
Hordeum sp.	Poaceae	
barley yellow dwarf		Statewide
oat mosaic		CA
wheat streak mosaic		57
Humulus lupulus	Cannabaceae	
hop mosaic		34
hop ringspot		34;57
hop vein-banding		34
Hydrangea arborescens	Hydrangeaceae	
hydrangea ringspot		30;37
Hydrangea macrophylla	Hydrangeaceae	
hydrangea ringspot		27
Iberis sp.	Brassicaceae	
aster yellows		19
Impatiens balsamina	Balsaminaceae	
clitoria yellow vein		43
tomato spotted wilt		43
Imperata brevifolia	Poaceae	
sugarcane mosaic A		34
Ipomoea batatas	Convolvulaceae	
internal cork virosis		24;38
mottle necrosis		24
sweet potato feathery mottle		01
sweet potato russet crack		10;24;37;38;50
sweet potato yellow dwarf		24
Iris fillifolia	Iridaceae	
iris mild mosaic		21
Iris xiphium	Iridaceae	
iris mild mosaic		21;38;41;44
Iris sp.	Iridaceae	
cucumber mosaic		39
iris mild mosaic		21;41
Jasminum sp.	Oleaceae	
infectious chlorosis		37
infectious variegation		19
Juglans ailanthifolia	Juglandaceae	
walnut bunch		CA

Juglans cinerea	Juglandaceae	
walnut bunch		CA
Juglans Hindsii	Juglandaceae	
cherry leaf roll		CA
Juglans nigra	Juglandaceae	
walnut bunch		CA
Juglans regia	Juglandaceae	
cherry leaf roll		CA
walnut bunch		CA
Kalanchoe sp.	Crassulaceae	
Impatiens necrotic spot		1
Kalanchoe virus 1		43
Kochia scoparia	Chenopodiaceae	
beet curly top		CA
Lactuca canadensis	Asteraceae	
aster yellows		CA
Lactuca integrifolia	Asteraceae	
aster yellows		CA
Lactuca sativa	Asteraceae	
alfalfa mosaic		10;27
aster yellows		07;24;42;43;47;48
beet western yellows		27
beet yellow stunt		40;42;56
cucumber mosaic		27
lettuce big vein		Statewide
sowthistle yellow vein		CA
tobacco rattle		27;35;40
tobacco ringspot		27
tomato spotted wilt		07;10;27;34;44;48;50;56
turnip mosaic		27;39
Lactuca sp.	Asteraceae	
lettuce mosaic		16
Laelia sp.	Orchidaceae	
cymbidium mosaic		34
Laeliocattleya sp.	Orchidaceae	
cymbidium mosaic		38;39
Odontoglossum ringspot		38;39
Lamium amplexicaule	Lamiaceae	
aster yellows		CA
Lathyrus odoratus	Fabaceae	
pea mosaic		44
Layia sp.	Asteraceae	
tomato spotted wilt		CA
Lepidium campestre	Brassicaceae	
beet curly top		CA
Lilium auratum	Liliaceae	
lily streak mottle		41
Lilium longiflorum	Liliaceae	
lily streak mottle		01
lily symptomless		01;08;38;41
Lilium rubrum	Liliaceae	
lily streak mottle		41
Lilium sp.	Liliaceae	
cucumber mosaic		8;12;41
lily mottle mosaic		21
lily streak mottle		12;21
lily symptomless		04;12;41

Limonium latifolium	Plumbaginaceae	
aster yellows		56
turnip mosaic		37
Limonium sp.	Plumbaginaceae	
turnip mosaic		42
Linum sp.	Linaceae	
beet curly top		10;27
Lipans loeselii	Orchidaceae	
potato leafroll		33
potato virus S		33
potato virus X		33
potato virus Y		33
Lockhartia sp.	Orchidaceae	
cymbidium mosaic		07
Lotus sp.	Fabaceae	
beet curly top		CA
Lunaria sp.	Brassicaceae	
turnip mosaic		37
Lychnis divaricata	Caryophyllaceae	
lychnis ringspot		CA
Lycopersicon esculentum	Solanaceae	
alfalfa mosaic		Statewide
aster yellows		34;39
beet curly top		Statewide
cucumber mosaic		Statewide
potato leaf roll		43;54
potato virus A		37
potato virus X		15;20;37
potato virus X and tobacco mosaic		15;37;40;43
potato virus Y		37
tobacco etch		50;57
tobacco mosaic		Statewide
tobacco streak		34
tomato aspermy		31;57
tomato big bud		Statewide
tomato mosaic		01;11
tomato ringspot		24
tomato spotted wilt		Statewide
Malus floribunda	Rosaceae	
apple chlorotic leaf spot		41
Malus sylvestris	Rosaceae	
apple green crinkle		01;12;43;44
apple mosaic		Statewide
apple star cracking		44
apple stem pitting		27
apple union necrosis		CA
tomato ringspot		CA
Malus sp.	Rosaceae	
apple flat limb		CA
apple mosaic		44
apple stem pitting		CA
Malva parviflora	Malvaceae	
malva vein clearing		CA
Malva rotundiflora	Malvaceae	
malva vein clearing		CA

Malva sylvestris	Malvaceae	
malva vein clearing		CA
Malva sp.	Malvaceae	
beet curly top		CA
malva vein clearing		27
malva yellows		CA
tomato spotted wilt		CA
Mandevilla aquifolium	Apocynaceae	
bean yellow mosaic		43
Marah macrocarpus	Cucurbitaceae	
wild cucumber mosaic		CA
Masdevallia sp.	Orchidaceae	
bean yellow mosaic		19;31;40
cymbidium mosaic		34
Matthiola incana	Brassicaceae	
beet curly top		CA
Matthiola sp.	Brassicaceae	
turnip mosaic		13
Medicago sativa	Fabaceae	
alfalfa mosaic		Statewide
aster yellows		06;56
beet curly top		CA
pea leafroll		10;13;27;40;48;50;57
pea streak		10;13;27;40;48;50;57
red clover vein mosaic		11;27;50;57
Melilotus indica	Fabaceae	
beet mosaic		CA
pea enation mosaic		CA
Miltacidium sp.	Orchidaceae	
cymbidium mosaic		07
Miltonia sp.	Orchidaceae	
cymbidium mosaic		07;42
Mirabilis jalapa	Nyctaginaceae	
beet curly top		CA
Morus alba	Moraceae	
fig mosaic		31
mulberry mosaic		07
Myoporum sp.	Myoporaceae	
alfalfa mosaic		37
Nandina compacta	Berberidaceae	
cucumber mosaic		43
nandina mosaic		43
Nandina domestica	Berberidaceae	
cucumber mosaic		34
Narcissus pseudonarcissus	Amaryllidaceae	
narcissus fleck		03;12;44
Narcissus sp.	Amaryllidaceae	
bean yellow mosaic		07
narcissus yellow stripe		07;12
Nasturium officinale	Brassicaceae	
cucumber mosaic		43
turnip mosaic		40
Nicotiana sp.	Solanaceae	
beet curly top		CA
tobacco mosaic		19
tomato spotted wilt		CA

Nopalxochia sp.	Cactaceae	
cactus X		CA
Ocimum basilicum	Lamiaceae	
alfalfa mosaic		43
cucumber mosaic		37;43
tomato spotted wilt		43
Olea europaea	Oleaceae	
sickle leaf		39
Oncidium cheirophorum	Orchidaceae	
cymbidium mosaic		07
Oncidium flexuosum	Orchiaceae	
cymbidium mosaic		01
Oncidium sp.	Orchidaceae	
cymbidium mosaic		34
Odontoglossum ringspot		41
Opuntia microdasys	Cactaceae	
opuntia virus		37
Osteospermum fruticosum	Asteraceae	
lettuce mosaic		27
Osteospermum sp.	Asteraceae	
biden's mottle		56
Pachyphytum werdermanii	Crassulaceae	
saguaro cactus		CA
Paeonia officinalis	Paeoniaceae	
peony ringspot		43;47
Papaver nudicaule	Papaveraceae	
tomato spotted wilt		CA
Paphiopedilum sp.	Orchidaceae	
cymbidium mosaic		21;41;42;47
Passiflora sp.	Passifloraceae	
cucumber mosaic		01
passionfruit woodiness		01
Pastinaca sativa	Apiaceae	
aster yellows		CA
hemlock ringspot		CA
Pelargonium peltatum	Geraniaceae	
pelargonium leaf curl		41
Pelargonium X *hortorum*	Geraniaceae	
tobacco ringspot		34
tomato ringspot		34
cucumber mosaic		41
Pennisetum glaucum	Poaceae	
sugarcane mosaic A		57
Peperomia caperata	Piperaceae	
tobacco mosaic		08
Peperomia sp.	Piperaceae	
tobacco ringspot		08
tomato ringspot		08
Peristeria sp.	Orchidaceae	
cymbidium mosaic		34
Persea americana	Lauraceae	
avocado sunblotch		42;43
Petroselinum crispum	Apiaceae	
alfalfa mosaic		50
beet curly top		CA
strawberry latent ringspot		CA

Petunia hybrida	Solanaceae	
aster yellows		36;47
beet curly top		CA
petunia mosaic		41
tomato spotted wilt		CA
Petunia sp.	Solanaceae	
tobacco mosaic		57
Phacelia sp.	Hydrophyllaceae	
beet curly top		CA
Phalaenopsis sp.	Orchidaceae	
cymbidium mosaic		42
Impatiens necrotic spot		1
Odontoglossum ringspot		01;34;41
Phaseolus coccineus	Fabaceae	
bean common mosaic		42
Phaseolus lunatus	Fabaceae	
alfalfa mosaic		50
bean common mosaic		39;50
beet curly top		CA
Phaseolus vulgaris	Fabaceae	
bean common mosaic		Statewide
bean yellow mosaic		Statewide
beet curly top		CA
cucumber mosaic		50
pea enation mosaic		50
Phaseolus sp.	Fabaceae	
bean common mosaic		13;42;43;51;52
bean yellow mosaic		01;04;42;43;52
Philodendron sp.	Araceae	
dasheen mosaic		30
Pholidota imbricata	Orchidaceae	
Odontoglossum ringspot		39
Phragmipedium Hartwegii	Orchidaceae	
cymbidium mosaic		07
Odontoglossum ringspot		07
Physalis floridiana	Solanaceae	
beet western yellows		CA
Picris echioides	Asteraceae	
lettuce mosaic		27
tomato ringspot		38
Pisum sativum	Fabaceae	
bean yellow mosaic		44
pea enation mosaic		27;41;42;57
pea mosaic		12;39;42;44;49
tomato spotted wilt		CA
Pisum sp.	Fabaceae	
pea enation mosaic		27;48
pea mosaic		40;43
pod-deforming pea mosaic		40
Pittosporum sp.	Pittosporaceae	
pittosporum ringspot		19
Plantago sp.	Plantaginaceae	
tomato ringspot		38
Polygonum aviculare	Polygonaceae	
beet curly top		CA

Poncircus trifoliata	Rutaceae	
citrus exocortis		33
Portulaca grandiflora	Portulacaceae	
beet curly top		CA
Primula obconica	Primulaceae	
tomato spotted wilt		CA
Primula vulgaris	Primulaceae	
primula mosaic		41
Prunus americana	Rosaceae	
apricot ring pox		19;31
plum line pattern		31;36;49;54
prunus necrotic ringspot		49
Prunus amygdalus	Rosaceae	
prunus necrotic ringspot		04;06;07;31;57
tomato ringspot		38;57
Prunus armeniaca	Rosaceae	
apricot ring pox		01;10;33
peach mosaic		33
plum line pattern		07;31;41
prune dwarf		50
prunus necrotic ringspot		07
tomato ringspot		CA
Prunus avium	Rosaceae	
apple mosaic		34;51
apricot ring pox		33
cherry buckskin		47;58
cherry mottle leaf		CA
cherry rasp leaf		04;07;39;49
cherry rugose mosaic		50
cherry rusty mottle		39
little cherry		04;12
plum line pattern		07;21;43;49
prune dwarf		CA
prunus necrotic ringspot		Statewide
tomato ringspot		CA
Prunus cerasifera	Rosaceae	
plum line pattern		49
Prunus cerasus	Rosaceae	
cherry mottle leaf		CA
prune dwarf		CA
prunus necrotic ringspot		03;57
Prunus domestica	Rosaceae	
apple mosaic		37;51
plum line pattern		Statewide
prune dwarf		CA
prune white spot		07;31;54
prunus necrotic ringspot		CA
tomato ringspot		07
Prunus dulcis	Rosaceae	
almond bud failure		06;50;57
prune dwarf		50
prunus necrotic ringspot		04;06;07;24;31;39;57
tomato ringspot		CA
Prunus illicifolia	Rosaceae	
peach western X		48

Prunus mahaleb	Rosaceae	
cherry buckskin		48
Prunus persica	Rosaceae	
almond mosaic		24
apricot ring pox		33
asteroid spot		CA
cherry mottle leaf		CA
cherry rasp leaf		39
peach blotch		07;30;37;50;54
peach calico		Statewide
peach mosaic		19;30;33;36
peach stem pitting		CA
peach stubby twig		24;31;34
peach stunt		39;54
peach wart		36
peach western X		04;20;24;31;48;51;54;57
peach yellows		36
plum line pattern		34
prune dwarf		39;54
prunus necrotic ringspot		Statewide
tomato ringspot		48;57
yellow leaf roll		24;39;51;57
Prunus persica var. *nectarina*	Rosaceae	
asteroid spot		CA
peach blotch		31
peach calico		10;54
peach mosaic		33
peach stubby twig		07
prune dwarf		54
prunus necrotic ringspot		24
tomato ringspot		CA
Prunus salicina	Rosaceae	
peach mosaic		36
plum rusty blotch		Statewide
Prunus serrulata	Rosaceae	
prunus necrotic ringspot		38
Prunus sultana	Rosaceae	
apricot ring pox		54
Prunus sp.	Rosaceae	
apple mosaic		34;51
plum line pattern		35
prune diamond canker		31;49
prune dwarf		CA
prunus necrotic ringspot		01;24;34;51;57
rugose mosaic		Statewide
Pyrus communis	Rosaceae	
apple star cracking		01
pear blister canker		09
pear decline		31;34;37;43;48;58
pear stony pit		02;09;23;34;43
pear vein yellows		07;08;31;44;53
red mottle		31
Quercus lobata	Fagaceae	
alfalfa mosaic		49
Quercus sp.	Fagaceae	
prune dwarf		05

Ranunculus sp.	Ranunculaceae	
bean yellow mosaic		56
ranunculus mosaic		37
Raphanus raphanistrum	Brassicaceae	
tobacco streak		CA
Raphanus sativus	Brassicaceae	
beet curly top		CA
radish mosaic		CA
turnip mosaic		CA
Rheum rhaponticum	Polygonaceae	
beet curly top		CA
Rhipsalis paradoxa	Cactaceae	
cactus X		CA
Rhododendron sp.	Ericaceae	
rhododendron necrotic ringspot		01
Rhynchostylis gigantea	Orchidaceae	
cymbidium mosaic		19
Ribes sativum	Rosaceae	
currant mosaic		44
Rosa delecta	Rosaceae	
rose leaf curl		10
Rosa gaelica	Rosaceae	
rose spring dwarf		01
Rosa multiflora	Rosaceae	
rose spring dwarf		34
Rosa sp.	Rosaceae	
apple mosaic		07;24;30;34;43;49;51
plum line pattern		19
prune dwarf		07;34
prunus necrotic ringspot		Statewide
rose leaf curl		01;10;19;34;43
rose mosaic complex		Statewide
rose rosette		25;26
rose spring dwarf		10;17;19;24;31;34;36
rose streak		CA
rose yellow mosaic		10;21;23;34;38
tobacco ringspot		15
tomato ringspot		15;34
Rubus fruticosus	Rosaceae	
blackberry dwarf		CA
Rubus idaeus	Rosaceae	
rubus stunt		34
rubus yellow net		12
Rubus ursinus var. *loganobaccus*	Rosaceae	
calico mosaic		44
Rubus vitifolius	Rosaceae	
olallie dwarf		45
Rubus sp.	Rosaceae	
rubus yellow net		34;49
Rumex acetosa	Polygonaceae	
beet curly top		CA
Saccharum officinarum	Poaceae	
sugarcane mosaic		10;13;20;30
Salsola iberica	Chenopodiaceae	
beet curly top		CA

Salvia sp.	Lamiaceae	
tomato spotted wilt		CA
Scabiosa atropurpuea	Dipsacaceae	
beet curly top		CA
teasel mosaic		CA
Schlumbergera Bridgesii	Cactaceae	
cactus X		01;39
Schlumbergera orrsichiana	Cactaceae	
cactus X		CA
Schlumbergera hy. 'Gold Charm'	Cactaceae	
cactus X		CA
Schlumbergera hy. 'Sonja'	Cactaceae	
cactus X		CA
Secale cereale	Poaceae	
barley yellow dwarf		49
Secale sp.	Poaceae	
barley yellow dwarf		50
Sedum orbatum	Cactaceae	
cactus X		CA
Senecio X hybridus	Asteraceae	
tomato spotted wilt		27;43
Setaria lutescens	Poaceae	
sugarcane mosaic A		10;54;57
Silybum marianum	Poaceae	
tobacco streak		CA
Sinningia speciosa	Gesneriaceae	
tomato spotted wilt		43
Solanum melongena	Solanaceae	
tomato spotted wilt		CA
Solanum tuberosum	Solanaceae	
alfalfa mosaic		20;47
aster yellows		09;28;39;42
beet curly top		15;42
mild mosaic		41
net necrosis		15;44;47
potato leaf roll		Statewide
potato purple top		29
potato rugose mosaic		12;39
potato stem mottle		40
potato virus A		43
potato virus M		41
potato virus S		Statewide
potato virus X		Statewide
potato virus Y		15;18;37;43
potato witches broom		37
potato yellow dwarf		24
tobacco rattle		15;40;54
Sonchus oleraceus	Asteraceae	
alfalfa mosaic		13
cucumber mosaic		13
sonchus yellow net		57
sowthistle yellow vein		CA
Sonchus sp.	Asteraceae	
alfalfa mosaic		13
Sorghum bicolor	Poaceae	
sugarcane mosaic		Statewide

Sorghum bicolor var. *subglabrescens*	Poaceae	
sugarcane mosaic		39
Sorghum bicolor var. *sudanense*	Poaceae	
sugarcane mosaic		15;57
Sorghum halepense	Poaceae	
sugarcane mosaic		24;36;54
sugarcane mosaic A		10;15;16;19;20;34;39;50
Sorghum sudanense	Poaceae	
sorghum yellow banding		33
Sorghum vulgare	Poaceae	
sorghum stunt mosaic		13
Sorghum sp.	Poaceae	
sugarcane mosaic		11;57
Spinacia oleracea	Chenopodiaceae	
beet curly top		CA
cucumber mosaic		36;43
spinach yellow dwarf		36
tobacco rattle		27
tomato spotted wilt		CA
Stachys bullata	Lamiaceae	
turnip mosaic		38
Stellaria media	Caryophyllaceae	
lychnis ringspot		CA
Stellaria sp.	Caryophyllaceae	
beet curly top		CA
tomato spotted wilt		CA
Tagetes erecta	Asteraceae	
aster yellows		41
Taraxacum officinale	Asteraceae	
beet pseudo-yellows		CA
Tetragonia expansa	Aizoaceae	
beet curly top		CA
Tolmiea Menziesii	Saxifragaceae	
alfalfa mosaic		44
tomato bushy stunt		CA
Tradescantia sp.	Commelinaceae	
tobacco mosaic		34
tobacco ringspot		34
Tragopogon porrifolius	Asteraceae	
aster yellows		CA
Trifolium hybridum	Fabaceae	
aster yellows		57
Trifolium incarnatum	Fabaceae	
beet mosaic		CA
Trifolium pratense	Fabaceae	
aster yellows		57
Trifolium repens	Fabaceae	
alfalfa mosaic		57
aster yellows		34;52;57
Triticum aestivum	Poaceae	
barley yellow dwarf		17;18;34
Triticum sp.	Poaceae	
barley yellow dwarf		CA
oat mosaic		CA
wheat streak mosaic		57

Tropaeolum majus	Tropaeolaceae	
beet curly top		CA
nasturtium mosaic		CA
tomato spotted wilt		CA
Tropaeolum sp.	Tropaeolaceae	
tomato spotted wilt		27
Vanda coerulea	Orchidaceae	
cymbidium mosaic		41
Vanda teres	Orchidaceae	
cymbidium mosaic		07
Viburnum dentatum	Caprifoliaceae	
alfalfa mosaic		15
Viburnum opulus roseum	Caprifoliaceae	
alfalfa mosaic		11
Viburnum sp.	Caprifoliaceae	
alfalfa mosaic		23;24;34;39
cucumber mosaic		54
Vicia faba	Fabaceae	
beet curly top		CA
pea enation mosaic		41
subterranean clover red leaf		27
tomato spotted wilt		39;44
Vigna sesquipedalis	Fabaceae	
bean common mosaic		31
Vigna unguiculata	Fabaceae	
alfalfa mosaic		06;50
aster yellows		39
bean common mosaic		50
beet curly top		10
cowpea mosaic		10;50
cucumber mosaic		50
peanut stunt		CA
Vinca minor	Apocynaceae	
aster yellows		42
Vinca rosea	Apocynaceae	
potato yellow dwarf		33
Vinca sp.	Apocynaceae	
cucumber mosaic		30;56
necrotic ringspot		34
prune dwarf		34
Viola odorata	Violaceae	
bean yellow mosaic		07
Viola tricolor	Violaceae	
beet curly top		CA
Viola sp.	Violaceae	
alfalfa mosaic		43
beet curly top		19
Vitis rupestris	Vitaceae	
grapevine fan leaf		49
grapevine fleck		49
Vitis sp.	Vitaceae	
grape leaf roll		49
grape vein-banding		24
grapevine fan leaf		11;27
grapevine yellow mosaic		11;39
tomato ringspot		CA

Vitis vinifera	Vitaceae	
grape leaf roll		Statewide
grape vein-banding		23;28;48;49
grapevine asteroid mosaic		49
grapevine corky bark		49
grapevine enation		36
grapevine fan leaf		10;12;24;27;28;42;49;52
grapevine yellow mosaic		23;28;49
grapevine yellow vein		10;23;24;28;35;49
prune dwarf		48;49
Washingtonia robusta	Arecaceae	
palm mosaic		54
Zantedeschia aethiopica	Araceae	
dasheen mosaic		44;45
tomato spotted wilt		27;41
Zea Mays	Poaceae	
canna mosaic		01
corn stunt		CA
cucumber mosaic		54
sorghum stunt mosaic		13;50
sugarcane mosaic		Statewide
Zea Mays var. *saccharata*	Poaceae	
sugarcane mosaic		Statewide
Zinnia elegans	Asteraceae	
beet curly top		CA
nasturtium mosaic		CA
tomato spotted wilt		CA
Zinnia sp.	Asteraceae	
sugarcane mosaic		CA